ALTERNATIVES, INCLUDING THE PROPOSED ACTION

Scotty's Castle

Charcoal Kilns

OVERVIEW OF ALTERNATIVES

This section addresses a range of feasible and implementable options that were developed through public scoping and review of the first draft environmental impact statement released in September 1998. The range of alternatives identified includes actions that meet our stated purpose and need and could reasonably be implemented given the legislative and legal constraints under which the National Park Service operates and the specific legislative direction for the Death Valley National Park.

Alternative 1 presents the **proposed general management plan strategy** for the Park.

Alternative 2 provides a description of **existing management** activities and is commonly referred to as the no-action or status quo alternative. This is the management approach that the Park is currently following, and would continue to follow if no further agency action were taken.

Alternative 3 presents **optional management strategies** for some management issues where feasible and implementable alternative strategies were identified that meet our stated purpose and need for the plan. Many of the management activities in this alternative are the same as in the proposed action and are not repeated. Only those topics where options were identified are discussed.

If, through the consideration of public input, agency mission and legal requirements, some component of alternative 2 or 3 is preferred over what is currently in the proposed action, the final management plan selected in the record of decision could be a new alternative that contains components derived from any of the alternatives.

The approach to alternative development using themes was explored and rejected. Creating alternatives around themed concepts such as "Maximum Resource Protection" or "Enhanced Visitor Use," for example, typically creates public voting on alternatives based on titles rather than content, and often creates unrealistic expectations. In this plan we felt it would be better to present alternatives without theme titles, but that instead are composed of elements that could be considered against each other across alternatives. This approach creates an array of alternative choices for issues where public input suggested it was needed, but does not create unnecessary and unrealistic choices where no issues or clear options exist.

ALTERNATIVE 1: PROPOSED ACTION

GENERAL DESCRIPTION

The previous *General Management Plan* was approved for the Death Valley National Monument lands in 1989. The establishment of wilderness and addition of over a million acres of new lands by the California Desert Protection Act in 1994 requires the development of a new general management plan that would serve as the overall management strategy for the next 10 to 15 years under which more detailed activity or implementation plans would be prepared. As such, a general management plan is general rather than specific in nature, and focuses on purposes of the Park, its significant attributes, its mission in relation to the overall mission of the agency, what activities are appropriate within these constraints, and resource protection strategies. It also provides guidelines for visitor use and development of facilities for visitor enjoyment and administration of the Park.

Alternative 1 seeks to extend existing Park management strategies and NPS mission and policies to the management of the resources within the new lands added to the Park in 1994. It also strives to incorporate the designation of 95% of the Park as wilderness into the management approach. The Park would seek to protect resources commensurate with the visitor use mandate as the highest priority, with no derogation of Park values.

The proposed action addresses the removal of feral burros and horses from the Park in order to achieve the NPS mission of managing the unit for native desert species. It also recognizes the need to work cooperatively with the Bureau of Land Management on adjacent land where that agency's mandate from Congress is to manage wild horses and burros so as to "achieve and maintain a thriving natural ecological balance on public lands" where Herd Management Areas were established in 1971 and are in existence today. Eliminating some or all burros from an area to achieve a "thriving natural ecological balance" is a BLM option.

The proposal strives to balance the preservation of resources mission with specific mandates from Congress, while not allowing derogation of Park values. For example, grazing would continue at no more than current levels on the new lands, as per the California Desert Protection Act. This plan treats grazing as a component of management. Of four total allotments, two allotments are eliminated and one is retired, leaving one allotment remaining within the Park.

The proposed plan also identifies a number of other activity level plans needed to address site specific issues, such as the Saline Valley Warm Springs management and a wilderness/ backcountry management plan.

The proposed action also adopts a land acquisition strategy as presented in the "Land Protection Plan" (appendix B). This strategy would seek funding to allow acquisition of most private land from willing sellers based on priorities identified in the "Land Protection Plan."

FIGURE 3. PARK BOUNDARY AND PRELIMINARY WILDERNESS

(Back of Figure 3: Park Boundary and Preliminary Wilderness)

NATURAL RESOURCES

PHYSICAL ENVIRONMENT

Air Quality

The National Park Service has a responsibility to protect air quality under both the 1916 Organic Act and the Clean Air Act (42 U.S.C. 7401 et seq.). Although the Clean Air Act gives the highest level of air quality protection to class I areas, it provides many opportunities for the National Park Service to participate in the development of pollution control programs to preserve, protect, and enhance the air quality of all units of the national park system, including class II areas. The National Park Service would seek class I designation for the Park.

The National Park Service would seek to perpetuate the best possible air quality in the Park because of its critical importance to visitor enjoyment, human health, scenic vistas, and the preservation of natural systems and cultural resources. The National Park Service would work to promote and pursue measures to safeguard these values from the adverse impacts from air pollution. The National Park Service would strive to set the best example for others to follow in their development and management activities. When the impacts of existing or potential air pollution on Park resources are unclear, the National Park Service would err on the side of protecting air quality and related values for future generations. The Park's air monitoring program would continue under alternative 1. Death Valley National Park has a National Oceanographic & Atmospheric Administration weather station at Furnace Creek and would continue to be a participating member of a national air quality network and would monitor ozone and particulate matter.

Sections 118 and 176 of the Clean Air Act require federal agencies/facilities to meet all federal, state, and local air pollution control laws and regulations. In the case of units/facilities located in areas not meeting federal or state air pollution control standards (nonattainment areas), the units/facilities must conform to requirements established to attain and maintain those standards. The requirements could include provisions to reduce emissions from existing facilities and limit emissions from proposed facilities on a greater than 1:1 basis.

Since the Park is located in a nonattainment area for one or more air pollutants, no actions proposed in this alternative would lead to violations of federal or state air pollution control laws or regulations nor would they increase emissions that would violate the state conformity requirements. Park staff would work with air pollution control officials to ensure compliance with those requirements.

A more efficient and comprehensive approach for reducing regional haze that veils scenic vistas in parks was announced in April 1999 in a final rule. This rule builds upon existing air pollution control programs which are designed primarily to protect public health, and the first plans are due at the same time states submit plans for meeting new health-based air quality standards adopted by the Environmental Protection Agency last summer (2005–2008). But, the rule requires steady and continuing emission reductions even after health goals are met and sets a target date of 2064 for achieving "natural" visibility conditions in national parks and wilderness areas. States will be required to submit 10-year plans, with measures needed to stay on track toward that target (at least a 10% improvement in visibility each decade). Irrespective of what other measures states may choose to adopt, the rule requires that the "best available retrofit technology" (BART) be installed at hundreds of power plants and industrial facilities that were built without pollution controls and have otherwise avoided installing modern technology. States will have the option of achieving BART-or-better emission reductions through economic incentives or market-based programs.

Viewsheds

The Park would prepare guidelines for the developed areas. These guidelines would be prepared to establish visual consistency and themes in facility development. Guidelines would also be created for reaching visual compatibility with surrounding landscapes, significant architectural features, and site details. The primary objective of guidelines would be to create harmony between the built environment and the natural environment.

With the increasing use of cellular communication equipment, more antennas and relay equipment are being installed throughout the country. The overall management goal of each NPS unit would be to protect and maintain the visual quality of the landscape and the built environment. The Park would implement the following objectives for communications equipment proposals:

- All above-ground communication equipment should not significantly distract from the visual quality of the scenery.
- Each new proposal for radio or cellular antennas or towers must demonstrate that the equipment would provide a critical service for visitors and NPS staff and is not duplicative.
- The installation of new equipment outside the Park or on existing communication towers or at defined sites should be considered before the construction of new sites in Park is considered.
- New locations would be reviewed through the environmental assessment process, which must consider impacts on the visual quality of the scenery.

The National Park Service would work with neighboring landowners on topics of mutual interest being sensitive to the influences and effects that Park management might have on adjacent landowners. The National Park Service would seek to enhance beneficial effects and to mitigate adverse effects in ways consistent with its policies and management objectives. The agency would encourage compatible adjacent land uses and seek to mitigate potential adverse effects on Park values by actively participating in planning and regulatory processes of neighboring jurisdictions, other federal, state, and local agencies, and Native Americans.

Night Sky

The National Park Service would cooperate with neighbors and local government agencies to seek to minimize artificial light intrusion, recognizing that darkness and the night sky are part of the overall visitor experience. The National Park Service would strive to set the best example in all developments that involve the use of artificial outdoor lighting, ensuring that it is limited to basic safety requirements and is shielded to the maximum extent possible, to keep light on the intended subject and out of the night sky. Baseline light measurements would be established for night use for monitoring changes over time.

Noise and Overflights

The National Park Service would strive to preserve the natural quiet and sounds associated with the physical and biological resources of the Park. Activities causing excessive or unnecessary sounds in or adjacent to the Park, including low-level aircraft overflights, would be monitored, and action would be taken to prevent or minimize unnatural sounds adversely affecting Park resources and values or visitor enjoyment. The National Park Service would collaborate with the Department of Defense to minimize impacts on visitors and resources from military overflights, as authorized by sec. 802 of the California Desert Protection Act.

Water Resources

Water Rights. The California Desert Protection Act of 1994 in section 706(a), with respect to each wilderness area, reserves a quantity of water sufficient to fulfill the purposes of the act. Section 706(b)

mandates that the Secretary of the Interior and all other officers of the United States take "all steps necessary to protect the rights reserved by this section." Federal reserved rights generally arise from the purposes for the reservation of land by the federal government. When the government reserves land for a particular purpose, it also reserves, explicitly or by implication, enough unappropriated water at the time of the reservation as is necessary to accomplish the purposes for which Congress or the President authorized the land to be reserved, without regard to the limitations of state law. The vested rights are valid as of the date of the reservation, whether or not the water is actually put to use, and are superior to the rights of those who commence the use of water after the reservation date. General adjudications are the means by which the federal government claims its reserved water rights. The McCarran Amendment (66 Stat. 560, 43 U.S.C. 666, June 10, 1952) provides the mechanism by which the United States, when properly joined, consents to be a defendant in a suit to adjudicate water rights. The precise nature and extent of the National Park Service's water rights probably will remain uncertain until the United States is joined in an adjudication, the Department of Justice files claims to water rights on behalf of the National Park Service, and the court decrees the United States. Hence, it is the responsibility of both the National Park Service and the Bureau of Land Management to protect the reserved water rights established under the California Desert Protection Act and other applicable federal authorities.

Death Valley National Park was involved in a historic water rights decision, when the U. S. Supreme Court in 1976 determined that the NPS had a reserved water right to a certain level of ground water at Devil's Hole. This Supreme Court action is frequently referred to as *Cappaert v. United States*. The purpose of the reserved water right is to maintain the water level in Devils Hole to assure the survival of the Devils Hole Pupfish, an endangered species.

Since 1976 the NPS has been actively protecting the water right to the Devils Hole area. NPS believes the continuation of this approach is vital to the long term viability and survival of the Devils Hole Pupfish and other Park resources.

The NPS participates in California and Nevada administrative water rights proceedings to protect Federal reserved, riparian, and appropriative rights established for Death Valley National Park. The purpose of this participation is to protect Park water rights from injury by threats such as new appropriations for groundwater located upgradient of Park water sources.

NPS Management Policies (1988) state:

> *All rights to the use of water diverted to or used on federal lands within the national park system by the United States or its concessioners, lessors, or permittees will be perfected in the name of the United States.*

The National Park Service in its general planning process for each unit of the national park system and the Bureau of Land Management in its planning process for each wilderness area have jointly agreed to incorporate their respective policies, guidelines, and administrative procedures and apply the following principles to discharge their responsibilities under section 706 of the California Desert Protection Act to manage and protect federal reserved water rights (Desert Managers Group 1995):

- inventory all water sources within the boundaries of the wilderness area/park unit
- share water source inventory data
- jointly request from the California Division of Water Rights notification of any filing for appropriated water rights within or adjacent to the boundaries of BLM wilderness or units of the national park system
- defend federally reserved water rights through the state of California administrative process and, if necessary, seek judicial remedy in the appropriate courts

- quantify the amount of water reserved to fulfill the purpose of the reservation as part of any adjudication in California in which the United States may be joined under the McCarran Amendment
- where necessary, pursue acquisition of any existing nonfederal appropriated water right within their respective jurisdictions
- because use of percolating groundwater does not require a permit from the state of California, participate in local government proceedings that authorize nonfederal parties to withdraw percolating groundwater where such withdrawals may impact water sources within their respective jurisdictions to which federally reserved water rights are attached
- participate in any proceedings pursuant to Nevada state water law that may authorize withdrawal of groundwater where such withdrawal may impact water sources within their jurisdictions to which federally reserved or appropriated water rights are attached
- vigorously defend water travelling to the Park in the Death Valley aquifer from Nevada
- work with holders of water rights to restore modified water sources to natural conditions while still allowing for valid existing uses

Water Use. Water would be used efficiently and frugally in the Park. The National Park Service would seek to protect, perpetuate, and possibly restore surface water and groundwater as integral components of Park aquatic and terrestrial ecosystems. Surface water and groundwater withdrawn for the Park's use would be the amount necessary to achieve Park purposes. All water withdrawn from the Park for domestic use would be returned to the Park watershed system once it has been treated to ensure that there would be no impairment of Park resources. Interbasin transfers would be avoided. If adverse effects were found, the National Park Service would take all legal and appropriate steps necessary to protect natural resources from the effects attributed to such activities. The ongoing water-monitoring program would continue. Death Valley National Park will seek to restore, maintain, or enhance the quality of all surface and ground waters within the Park consistent with the Clean Water Act (33 U.S.C. et seq.) and other applicable federal, state, and local laws and regulations.

The Park would continue to maintain the water levels at Devils Hole, the home of the endangered Devils Hole pupfish. The Park would continue to actively monitor the pool's water elevation. The Park would continue to be involved in an interagency effort to monitor the water flow in the Death Valley Groundwater Flow System to help ensure that any major water extraction that might occur miles away from the Park do not adversely affect the Park's resources. Monitoring other wells and springs within the Park including Darwin Falls and in at least nine water delivery systems would also continue.

Floodplain and Wetland Areas. The occupancy and modification of floodplain and wetland areas would be avoided wherever possible. Where no practicable alternatives exist, mitigating measures would be implemented to minimize potential harm to life, property, and the natural floodplain and wetland values. Management of floodplain and wetland areas is subject to the provisions of Executive Order 11988, "Floodplain Management" (42 U.S.C. 4321), Executive Order 11990, "Protection of Wetlands" (42 U.S.C. 4321), and the Rivers and Harbors Act (33 U.S.C. 401 et. seq.), and section 404 of the Clean Water Act (33 U.S.C. 1344).

Water Developments. The National Park Service would examine the use of and need for all guzzlers, livestock tanks, and troughs (hereafter referred to as developed water sites). Water at developed water sites would be retained for native plants and wildlife if these facilities were needed to mitigate for local water losses due to previous human activities. Simultaneously, with the retention of these developed water sites, the National Park Service would actively begin to restore natural water sources to be self-sustaining. When a water source became self-sustaining, the artificial facility would be removed. Requests to use

motorized access to guzzlers in wilderness areas (to maintain guzzlers or replenish water) would be reviewed individually.

Water is necessary for livestock grazing on NPS lands. The amount of water that would be diverted or used for livestock would be maintained for the animals' health. If and when animal unit months (AUMs) were reduced (no increase in AUMs is allowed under the California Desert Protection Act) a concurrent reduction in water for livestock purposes would be expected. The National Park Service would examine these developed water facilities and take action, where appropriate, to restore natural waters. If the National Park Service did not own the water rights, the agency would work with the owners to encourage them to consider the benefits of natural water restoration to restore modified water sources to natural conditions while still allowing for valid existing uses.

Paleontological Resources

Some paleontological research has been initiated or funded by the National Park Service. Most is accomplished by outside institutions that request and receive NPS research permits. The institutions, in exchange for the opportunity to study NPS resources, agree to provide information that the National Park Service can use to develop strategies for resource protection, management, and interpretation.

Paleontological resources, including both organic and mineralized remains in body or trace form, would be protected and preserved for public enjoyment, interpretation, and scientific research in accordance with Park management objectives and approved resource management plans. Although paleontological research by the academic community would be encouraged and facilitated under research permits subject to NPS management criteria, the National Park Service would enhance its own knowledge of paleontological resources through comprehensive inventory and monitoring programs. To enhance the conservation and management of paleontological resources, the National Park Service would seek to develop collaborative partnerships with government agencies, academic institutions, and public and private organizations with paleontological resource management or research capabilities/expertise. Management actions would be taken to prevent illegal collecting. Actions also might be taken to prevent damage from natural processes such as erosion. Protection could include construction of shelters over specimens for interpretation in situ, stabilization in the field, or collecting, preparing, and placing of specimens in museum collections. The localities and geologic settings of specimens would be adequately documented when specimens were collected.

Geological Resources

Park geological features would be protected. Certain fragile geologic features, such as sand dunes and salt flats would be monitored to determine if measures were needed to prevent or stop human-caused damage. Mapping by U.S. Geological Survey would be conducted to map Death Valley National Park's renowned exposed geology. Resource protection would continue to consist of random patrols of the backcountry as well as limited public closures to protect sensitive sites.

Cave Resources

NPS *Management Policies* (1988) provide that caves be managed to perpetuate their atmospheric, geologic, biological, ecological, and cultural resources in accordance with approved cave management plans. Natural drainage patterns, air flows, and plant and animal communities are to be protected. In general, the NPS management direction is to avoid development of caves and to perpetuate natural conditions, while seeking to protect the resource. Caves are not common in Death Valley. The most significant cave is Devils Hole. It is closed to public use to protect the endangered pupfish.

BIOLOGICAL ENVIRONMENT

Sensitive Species

The National Park Service would identify and promote the conservation of all federally listed or proposed threatened or endangered species and their critical habitats within Park boundaries in ways that were consistent with the purposes of the Endangered Species Act (16 U.S.C. 1531 et seq.). As necessary, the National Park Service would control visitor access to and use of critical habitats and might limit access to especially sensitive areas. Active management programs would be conducted as necessary to perpetuate the natural distribution and abundance of threatened or endangered species and the ecosystems on which they depend.

The National Park Service has prepared a list of all known federal, state, and locally listed threatened, endangered, rare, declining, sensitive, or candidate species that are native to and present in the Park, as well as their critical habitats. (See appendix C). Controlling access to critical habitats or conducting active management programs would be considered that would be similar to activities conducted to perpetuate the natural distribution and abundance of federally listed species. Plant and animal species considered rare or unique to the Park would be identified and their distribution would be mapped. All management actions for protection and perpetuation of special status species would be determined through the Park's updated natural and cultural resource management plan or site-specific planning efforts.

Death Valley National Park would continue to manage and protect the 40-acre area known as Devils Hole, its endangered pupfish and other sensitive aquatic and terrestrial plants and animals. This area is within the external boundaries of Ash Meadows Wildlife Refuge managed by the U.S. Fish and Wildlife Service. The existing management activities at Devils Hole are discussed in alternative two. Those maintenance, research and monitoring activities would continue under this alternative. Please refer to that discussion for a complete description. Park staff have recently initiated a three year in-depth ecology study of the Devils Hole ecosystem. The study will provide a comprehensive inventory of the biological components that are present in the aquatic habitat (fish, invertebrates, and algae). The study will also describe the inter-related nature of the different species that are present, so a long-term monitoring and protection program for the entire biological community can be developed.

A draft site management plan is being prepared for the Eureka Dunes area. This plan, in consultation with the U.S. Fish and Wildlife Service, addresses the protection of sensitive species. Potential actions to be considered as part of this plan include moving both parking areas to less sensitive sites, a step-up plan for limiting human activities, if necessary, controlling actions on exotic Russian thistle, converting a hodgepodge of roads to foot access, and continuing the main access road in a graded, dirt condition. These will further enhance the protection of sensitive species as a result of being within Death Valley National Park.

Introduced Species

Nonnative plants and animals would not be introduced except under the most unusual circumstances (i.e., historic landscape restoration at Scotty's Castle). The management of populations of exotic plant and animal species, up to and including eradication, would be undertaken wherever such species threaten Park resources or public health and when control was prudent and feasible.

Burro and Wild Horse Management. The National Park Service would adopt the "no burro or wild horse" strategy that exists for the former monument lands (NPS 1983) and apply it to the newly added Park lands. Wild horses and burros, if encountered, would also be removed following the strategy described below. This *General Management Plan* would also serve as an update of the existing burro management component of the Park's *Natural and Cultural Resource Management Plan*. A cooperative

agreement would be developed that assures that the Bureau of Land Management would take steps to control herds adjacent to the Park and would remove trespass burros and wild horses. The Bureau of Land Management has agreed to install boundary fences at critical points where herds are proposed adjacent to the Park, after consultation with the Park (Tim Salt, BLM District Manager, personal communication, 1998).

Removal of horses and burros from Park lands would be completed through a three phase removal program. Phase one consists of a Park-wide live capture program that would be in effect for a maximum of five years. Capture techniques during phase one would include three primary methods: 1) enticing burros and wild horses into corrals with water or food, 2) herding into corrals by using wranglers and possibly helicopters, and 3) netting and removal of burros with helicopters. This option would not be considered methods until corralling and herding methods become ineffective and remote terrain and cost-effectiveness become a consideration. All captured burros and wild horses would be adopted through existing BLM facilities or through direct or indirect adoption programs of the National Park Service, or adoption by the efforts of a third party. This phase began in 1999, and resulted in the live capture of 204 burros that were transferred to the Bureau of Land Management or a private burro advocacy group.

In phase two the National Park Service would actively solicit interested animal protection groups that would begin removing the remaining few animals. An agreement would be signed with the group(s) to provide up to 2 years to remove the remaining burros and wild horses from the Park at their expense. The National Park Service would provide oversight, and possibly some logistics support and use of some equipment and corrals. The duration of the phase two approach will be determined by effectiveness of the protection group capture efforts, i.e. if the groups could not demonstrate that they were capturing animals at a rate that was faster than the animal's reproductive rate, the time frame for phase two would be shorter than two years. It is anticipated that most of the burros and wild horses in the Park would likely be captured and removed through phases one and two. If no interested group is found within six months after the completion of phase one, the National Park Service would begin phase three.

In phase three NPS staff would eliminate the remaining few animals in the most cost-effective and humane manner to achieve a zero population. Removal efforts could involve a variety of techniques including, but not limited to shooting, wrangler/helicopter roundups, and netting-removal with helicopters. Phase three would continue for an indefinite time. Phase three could be suspended and phase two reinitiated if an animal protection group comes forward to conduct capture activities and provides clear evidence that their efforts are able to maintain herd levels at near zero levels. The Park would work expeditiously with groups that can demonstrate an effective ability to capture.

Phases can be run concurrently in different parts of the Park. For instance, the old monument lands have been in phase three for several years. This phase has been temporarily suspended while animal protection groups are actively working to capture burros there. The Park also maintains the option of returning to phase three in the old monument lands if live captures do not succeed in reducing the populations. As captures in the new Park lands proceed, a particular area of the Park, such as Saline Valley, could be placed in phase two or phase three separate from the rest of the Park.

The Park Service is aware of the burro's potential for rapid population growth (up to 20% per year). The above proposed removal strategy would result in a burro and wild horse population that approaches zero.

Concurrently with these control actions, when funding is made available, the National Park Service will work with the Bureau of Land Management and the California Department of Fish and Game on feasibility studies that involve boundary fences that are similar to the fence that has existed around the Nevada Triangle since 1988.

Nonnative Vegetation. The Park would continue to actively pursue the removal of nonnative tamarisk. Tamarisk eradication efforts would continue to identify areas where *Tamarix ramossisima* was gaining a foothold. The Park would continue the limited programs to control Russian thistle and hornwort (an aquatic annual plant at Saratoga Springs). However, as resource monitoring efforts highlight other problems, or research provides solutions to known problems, funding would be sought for additional eradication programs.

Disturbed Land Restoration

The National Park Service would seek to perpetuate native plant life as part of natural ecosystems. Natural landscapes and plants would be manipulated only when necessary to achieve approved management objectives. To the maximum extent possible, plantings in all areas would consist of species native to the Park or historically appropriate for the period or event commemorated. Native species would be emphasized. The use of exotic species would conform to the NPS exotic species policy (NPS 1988). Landscapes and plants might be manipulated to maintain habitat for threatened or endangered species, but in natural areas, only native plants could be used if additional plantings were done. Existing plants would be manipulated in a manner designed to restore or enhance the functioning of the plant and animal community of which the endangered species is a natural part.

In natural areas landscape conditions caused by natural phenomena such as landslides, earthquakes, floods, and natural fires would not be modified unless required for public safety, protection of NPS facilities, or necessary reconstruction of dispersed-use facilities, such as trails. Terrain and plants could be manipulated where necessary to restore natural conditions on lands altered by human activity.

In cultural areas, such as at Scotty' s Castle, trees, other plants, and landscape features would be managed to reflect the historic landscape or the historic scene associated with a significant historic theme or activity.

Death Valley National Park would continue rehabilitating abandoned mine sites. Rehabilitation efforts would continue to use techniques such as netting shafts and gating adits to eliminate safety hazards. Each site would be individually evaluated and action taken as appropriate to restore the area to as a natural conditional as possible, while considering other cultural and natural values. Consideration of bats and other wildlife, as well as cultural resources would be an integral part of the decision process.

FIRE MANAGEMENT

Although the National Park Service recognizes the natural role of fire in ecosystem processes, the effects of fire on components of desert ecosystems are not well understood. The National Park Service is assessing and documenting the state of existing fire effects research in desert ecosystems and formulating a desert fire management strategy. Unit-specific fire management plans would be developed consistent with this policy. Over the short term (1–10 years) the fire management policy would be guided by the best available scientific knowledge of fire effects and by current NPS policy direction. A number of changes would be implemented with regard to agency-wide fire management policy.

Management options include full suppression, prescribed fire, natural fire managed to achieve benefits to natural resources, or a combination of these. In many cases, appropriate management strategies would be pre-determined in the planning process, based on life and property considerations, location, identification of natural or cultural resources at risk, existing vegetation and fuels, terrain, and other factors. In other instances, management strategies would be determined on an individual basis, factoring in additional variables such as current and predicted weather conditions, staffing levels, resource management objectives, terrain, and identified planning parameters. Research burns might be initiated within specific prescriptions, and burn sites would be monitored to assess changes over time.

Protection of life and property is first and foremost. All human caused wildfires would be suppressed, and all fire management actions would be implemented using methods, equipment and tactics which cause the least impact to natural resources. Heavy equipment, such as bulldozers, would not be used except in emergencies as determined by the Superintendent. All staff will receive training on appropriate strategy, tactics and precautions in sensitive species habitat.

Fire management strategies within wilderness areas would also be determined based on the criteria discussed above. Additionally, a "minimum requirement" process would be undertaken for every fire in wilderness to determine the "minimum tool or administrative practice necessary to successfully and safely accomplish the management objective with the least adverse impact on wilderness character and resources" (*NPS Management Policies*). The use of mechanized equipment and transport (i.e. chain saws, portable pumps, vehicles and aircraft) would remain an exception to be exercised sparingly and only when it meets the test of being the minimum necessary for wilderness purposes or the protection of life or property. Such exceptions must be approved by the Superintendent or his/her designee.

The effects of fire on components of desert ecosystems, and the extent and degree of its historic role on biota are not well understood. The National Park Service is assessing and documenting the state of existing fire effects research in desert ecosystems. Over the short term (1–10 years) fire management strategies would be developed based on the best available science, field observations of fire effects and post-burn monitoring of selected sites. In cooperation with other desert parks, other federal and state land managers, and the research staff in the agency or at universities, fire-related research needs would be identified and long-term studies initiated. Specific research topics might include postfire successional trends, or effective postfire rehabilitation strategies.

Based on the results of fire management research, the Park would periodically revise its "Fire Management Plan."

RESEARCH

This alternative is the same as existing management except that congress reinforced the research objective of Death Valley in the California Desert Protection Act, and again in the 1998 National Parks Omnibus Management Act. Title II of that act contains the following:

- A mandate for research;
- Authority to enter into cooperative agreements with colleges and universities for the purpose of conducting multi-disciplinary research;
- Establishment of baseline information enabling the monitoring of long-term trends in the condition of national park system resources.
- An invitation for scientist to conduct approved research within units of the national park system.
- Measures to assure Park managers use research results in Park management.

Scientific research is not new to the Park. The Park would continue to procure the best science to meet its resource protection and management requirements.

INVENTORYING AND MONITORING

Inventorying and monitoring the Park's natural resources are necessary to gain a more complete understanding of their value and condition. The National Park Service would develop and implement a systematic, integrated program to identify, inventory, and monitor the Park's natural resources. The Park would work with academic institutions in retaining and enhancing opportunities for scientific research in undisturbed ecosystems such as the Park's wilderness areas. The Park would consult with people with

expertise in the resource or in developing and implementing an inventorying and monitoring program. A comprehensive strategy would be developed and implemented to ensure that regional, local, or national trends are documented and appropriate actions undertaken.

The Park's existing *Natural and Cultural Resources Management Plan* would be updated to reflect the changes that are proposed in this *Revised Draft Environmental Impact Statement and General Management Plan* for Death Valley National Park. The updated plan would present a detailed program for managing the Park's natural and cultural resources.

CULTURAL RESOURCES

The National Park Service would develop and implement a systematic, integrated program to identify, inventory, monitor, evaluate, and nominate archeological sites, historic properties, cultural landscapes, and ethnographic resources to the national register and would manage, protect, and preserve such listed properties in a way that would preserve their documented archeological, architectural, ethnographic, historic, or research values. A collection management program would be further implemented to: (1) improve storage conditions to meet standards for all Park collections stored; (2) provide a more comprehensive preventive conservation program; (3) acquire museum objects/specimens, including appropriate replacement furnishings for highly impacted objects targeted for exhibit; and (4) improve collection access and use, as appropriate. The collections management program would include cataloging the significant backlog of objects and collections at the Park and correcting the deficiencies identified in the "Checklist for Preservation and Protection of Museum Collections."

The National Park Service would develop and implement a systematic applied cultural resource research program to ensure that (1) there would be adequate baseline information on location, condition, threats, and significance/integrity of resources; (2) interpretation and preservation treatment of resources would be accurate; and (3) appropriate means would be used to manage, protect, preserve, and interpret Native American heritage or other ethnographic resources. The research program would include the following studies:

- archeological studies, including a regionally based archeological research plan, an updated archeological overview and assessment, and completion of archeological identification and evaluation studies
- ethnographic studies, including a cultural sites inventory
- historical studies, including a cultural landscape inventory and cultural landscape report, historic structure reports, an administrative history, and an updated list of classified structures
- an updated scope of collections statement and collection management plan

The Park's resource management plan would address the requirements, projects, and funding to implement the cultural resource program. To support this program, the National Park Service would develop collaborative partnerships with government agencies, tribes, and public and private organizations that have cultural resource management or research capabilities or expertise. These entities could include federal, state, and county agencies, academic institutions, local and regional cultural and historical organizations, and the Timbisha Shoshone Tribe or other Native American tribes having affiliation with lands in the national park. To achieve cultural resource program objectives, under the authority of 36 CFR 1.5, the National Park Service might control or limit human activities in areas designated as culturally sensitive or threatened.

NATIVE AMERICAN INTERESTS

For thousands of years, the Timbisha Shoshone Tribe has lived in and around the area that is now Death Valley National Park. For many years, the Tribe sought to obtain trust land within its aboriginal homeland. In 1994, Congress enacted the California Desert Protection Act, P.L. 103- 433, including Section 705(b) which begins to address the need of the Tribe for a recognized land base. Section 705(b) directs the Secretary of the Interior to conduct a study to identify lands suitable for a reservation for the Timbisha Shoshone Tribe which has no land base at present.

The draft report, "The Timbisha Shoshone Tribal Homeland (1999)," contains the recommendations of the joint Federal-Tribal negotiating team responsible for carrying out the suitability study. The study was conducted on a government-to-government basis with officially designated representatives of the Timbisha Shoshone Tribe and the Department of the Interior. It resulted in a comprehensive integrated plan to establish a permanent Homeland for the Tribe based on an analysis of the suitability of various lands within the tribal ancestral homeland in relation to basic tribal needs and consistency with Federal land management and stewardship mandates.

Among the factors restricting the ability of the negotiating team to identify a single contiguous area suitable for the establishment of a reservation were: natural limitations, including climate, geology, and the availability of water; mining claims; special resource designations such as Wilderness and Area of Critical Environmental Concern; and the availability of infrastructure such as roads, power, and other services.

This draft report concludes that the transfer of several separate parcels of land is needed and recommends transfer of 7,500 acres in trust to the Timbisha Shoshone Tribe. These parcels include 314 acres at Furnace Creek in Death Valley National Park encompassing the present Timbisha Village Site subject to jointly developed land use restrictions designed to ensure compatibility and consistency with tribal and Park values, needs and purposes. Based on the proposed land use restrictions and opportunities for future close collaboration with the Tribe, the National Park Service and the Tribe believe that the transference of Park land described above will enhance the cultural and historical interpretative opportunities available to the visiting public, but will not adversely impact Death Valley National Park. The report also seeks authorization to purchase two parcels of approximately 120 acres of former Indian allotted lands in the Saline Valley, California, at the edge of the Park, and the 2,430 acre Lida Ranch near Lida, Nevada from private owners.

This report also recommends a number of other arrangements authorizing tribal access to and traditional uses of, certain designated areas which will remain in public ownership. One example of the latter type of arrangement is the recommendation to seek designation of an area primarily in the western part of Death Valley National Park as the Timbisha Shoshone Natural and Cultural Preservation Area within which low impact, environmentally sustainable, tribal traditional uses, activities and practices will be authorized subject to existing law and a jointly established management plan agreed upon by the Tribe, the National Park Service and the Bureau of Land Management. The Tribe, the National Park Service, and the Bureau of Land Management see such a designation as a way of recognizing the common interests of the agencies and the Tribe in conserving and protecting this area. Examples of traditional tribal uses, practices and activities include seasonal camping, gathering pinyon nuts and other plants for medicinal purposes, but not the taking of wildlife within the Park.

The proposed legislation will affirm that the continued presence of the Tribe in the Park and in other parts of its ancestral homeland benefits the Park, the Tribe, and the American people.

The potential impacts of the land transfer are analyzed in the *Draft Legislative Environmental Impact Statement, Timbisha Shoshone Homeland* (2000). Any development or resource use activities will be part of future planning efforts and will be subject to appropriate National Environmental Policy Act compliance and public review.

VISITOR USE, SERVICES, AND FACILITIES

INTERPRETATION

The Park interpretive program would integrate in a balanced fashion the geological, cultural, and biological aspects of the Park. Through its primary interpretive themes, programs and interpretive information would concentrate on the harsh environment and the adaptations that all living things must make to survive. The three key subjects to be interpreted would include:

- geological processes and geographical relationships
- the cultural, historical, prehistoric, and Native American record
- desert ecosystems

The Park staff would continue to seek ways to improve the educational outreach program in surrounding communities and develop partnerships with local schools and similar groups. The intent of this program is to increase local community awareness of the Park purpose and resources, and continue to develop favorable partnerships and mutual support.

An "Interpretive Prospectus" (NPS 1990) was completed for Death Valley National Monument in 1990. The prospectus identified interpretive planning and development details appropriate for the monument. The expansion of Death Valley and the designation of large tracts of wilderness have made this plan obsolete. A comprehensive interpretive plan would be developed to replace the prospectus. This plan would reflect the additional Park lands, present individual site plans, and identify other appropriate support documents. It would also address the interpretive needs of Scotty's Castle and its related resources and would identify additional opportunities for visitors to learn more about the castle and its builders. Until the new comprehensive interpretive plan is developed for the entire Park, the current prospectus would direct the methods for interpreting the Park's varied resources.

Cultural resource sites that are easily accessible and historically important would be treated as significant interpretive stops. Access to other cultural resources would be improved only if the historical significance or resource integrity of a site made it worthy of a major interpretive effort and if its integrity was not threatened by an increase in visitation. The Park would increase efforts to inform the public, particularly in backcountry locations, that all historical and archeological objects are protected under federal law.

The Park would continue to seek additional ways to improve the living history program or other methods of interpreting Scotty's Castle.

The interpretation of prehistoric and contemporary Native American cultures would be integrated into parkwide interpretive themes, focusing on human adaptation to the desert environment. Programs, demonstrations, and guided walks would provide opportunities for visitors to understand these cultures. Tribal consultation would take place when planning interpretive opportunities pertaining to indigenous peoples.

To ensure the protection of especially fragile natural and cultural values, resource management specialists, interpretive planners, and designers would work together to develop ways for visitors to see the resources without causing unacceptable damage. The Salt Creek boardwalk is an example of this cooperative effort.

Many sites may contain fragile resources and safety hazards that must be considered when planning for access and interpretation. Measures would also be taken to mitigate any potential effects of increased visitor use. Wayside exhibits or brochures would be used to interpret these areas.

INFORMATION/ORIENTATION

Visitor Contact

Information and interpretive programs would focus on helping people learn about and enjoy the natural and cultural resources of the Park and giving them the opportunity to experience the intangible qualities that make the area unique — the quiet and isolation, the depth of colors, and the clear sky. Interpretative materials would reflect the different ecosystems represented in the Park's boundaries and would be developed at a level appropriate to a recognized need and location.

Providing interpretation and orientation information to visitors before they enter the Park would be emphasized. Visitors could also contact the Park by telephone, mail, internet, satellite information centers, and other means. The Park would continue to support the multiagency information center at Lone Pine, California, which serves visitors accessing Death Valley from the Owens Valley to the west, and the Mojave National Preserve's facility in Baker, California, which assists visitors approaching the Park from the I-15 corridor to the south. These points would provide additional locations for visitors to obtain orientation and interpretation information for the Park and the region prior to their arrival. The objective of supporting these offsite facilities would be to better prepare visitors for their visit to the Park.

Interpretive services would be provided wherever NPS staff could effectively connect with the public to increase their understanding and appreciation of Park resources. Staffed information/fee collection stations would continue to be located in Beatty, Nevada, and at Stovepipe Wells. Additional interpretive staffing and services would be placed at Stovepipe Wells to provide better year-round information to visitors.

Ranger stations at Grapevine, Wildrose, and Shoshone would also provide visitors with information and operate with volunteer staff as available. If visitation increases at these facilities, funding would be sought to increase NPS staff presence at these facilities to meet visitor demand for assistance.

Unstaffed orientation and information stations ("reception centers") would be developed within the Park along the Park's five major entrance roads that receive relatively high levels of traffic. These information stations would be proximal to fee collection stations, where applicable, so that visitors could receive additional information after paying entrance fees. Unstaffed information stations would function to help orient and inform visitors soon after they have crossed the Park boundary, rather than waiting to get information at the more distant developed areas in the Park interior.

Operations at Furnace Creek and Scotty's Castle would continue to provide visitor services such as a staffed visitor information desk, interpretive displays and exhibits, a large auditorium, and sales outlet of the Death Valley Natural History Association. Information on hiking, backcountry historical sites, and other day use activities would be made available at the visitor centers and the reception centers. The number of staffed interpretive programs would be expanded.

The Park would continue to maintain and enhance information on Death Valley via the National Park Service website (www.nps.gov/deva), and would continue to explore new opportunities for information distribution as technology develops. Death Valley is also a partner in a project to provide interagency desert-wide visitor information on the internet at a single site (www.californiadesert.gov).

Visitor support services, such as site bulletins and information/interpretation wayside exhibits would be developed to complement the expanded Park boundaries. Wherever wayside exhibits are inappropriate

and interpretation of resources is desired, brochures, or similar media, would be developed for specific themes or specific areas. They would be provided or offered for sale in appropriate locations.

Over 95% of the Park is designated wilderness and large portions of the Park are only accessible by four-wheel-drive vehicle, bicycle, or on foot. Visitors would explore these areas on their own. In these areas, onsite information/interpretive services would be minimal to non-existent and be restricted to threshold access points with few exceptions.

Waysides and Exhibits

Signs or exhibits would be posted at key road intersections leading to significant features. Distances, road conditions, and destinations or features along the way would be listed. This information would also help prevent people from mistakenly trying a road beyond their automobile's capability or their personal time limits. The Park would evaluate the need for trailhead information waysides that could serve visitors using trails. Design standards for these signs would be established in a Park sign plan.

Basic orientation information would also be made available on a 24-hour basis by using a variety of methods such as lighted exhibits, brochure dispensers, audio, permanent and portable information. Information and interpretive material would be available in other languages to meet the increasing demand. The use of international symbols and graphics would be used as much as possible to avoid multiple languages on displays.

The Park has many secondary entrances that receive moderate to light amounts of highway traffic. These points would be evaluated for the need to place information panels that would serve the same basic function as the information stations, but on a smaller scale. Each location would be evaluated to determine the appropriate information needed at each entrance.

Interpretive wayside exhibits within the Park would continue to be upgraded in accordance with a wayside exhibit plan. Additional wayside exhibits would be developed for key features along heavily traveled corridors in recently acquired lands and elsewhere in the Park if the need to interpret and or protect resources arises. Interpretive waysides would be kept to a minimal level (or number) on backcountry roads.

Partnerships

The National Park Service would continue to cooperate with other agencies and organizations to make information available along approach routes to the Park. Locations for displays and/or free publications outside of the Park would be considered to provide ways to serve people who want advanced information on the Park. Partnerships with communities, businesses and tourism associations may need to be developed to achieve this objective.

The Park would enter into partnerships with other land management units to provide the public with a variety of information on outdoor recreational opportunities within the region.

Partnerships will also be sought to fund various projects or projects within all management divisions in the Park.

VISITOR FACILITIES

All improvements to visitor facilities would be subject to federal requirements to meet accessibility standards for people with disabilities. The Park staff would also consider creative ways to increase the recreational opportunities for visitors with disabilities.

Entrance/Information Facilities

Care would be taken to visually blend these entrance/information stations with their surroundings. Entrance stations are planned for State Highway 190 on the east and west sides of the Park. This will improve visitor information as well as increasing fee revenues. The existing Grapevine Ranger Station would continue as an information station that is staffed as staff and funding allows.

Interpretive Facilities

The Park would continue to operate major visitor centers at Furnace Creek and Scotty's Castle. The largest visitor services complex is centrally located at Furnace Creek and includes a staffed visitor information desk, interpretive displays, a large auditorium, and the Death Valley Natural History Association sales outlet. This facility was completed in 1960 and designed when annual visitation was 250,000. In 1999, visitation was about 1.2 million. Its interpretive media is dated and focuses on the old monument lands. Actions would be taken to update this facility and improve interpretive displays and to expand the number of displays to include information on recently acquired lands. A comprehensive design plan would be prepared to update and improve the Furnace Creek visitor center.

Other structures at Scotty's Castle might be opened for public tours or adapted for other uses if these actions are compatible with recommendations from the historic resource study/historic structure report and the goals of restoring the resource's cultural landscape. Such uses might include exhibit space, audiovisual presentations, or curatorial space. The Park would prepare a study to consider ways to reduce long waits for tours and parking on busy holiday weekends at the Castle. Options might include a reservation system.

Comprehensive design packages for visitor facilities would strive to balance resource protection with visitor access and safety, minimize impacts on sensitive resources, and improve the visual quality of the areas and overall visitor experience. Measures would be taken to mitigate any potential effects of increased visitor use. Locations for such improvements include key attractions such as Badwater or especially sensitive natural and/or cultural resources such as Eureka Dunes and Devils Hole.

Developed Campgrounds

The Park's existing campgrounds would be improved by eliminating safety hazards, better defining and separating sites, improving restrooms, and adding amenities such as newer picnic tables. Camping facilities at higher elevations would be upgraded to enhance summer camping activities. All recreational vehicles (RV) campgrounds would be designed to meet national fire codes, which require 900 square feet per RV site and allow a maximum of 30 recreational vehicles per acre. The Park staff would work to identify issues and concerns related with tent camping and find ways to accommodate all types of campers, including tents, in developed campgrounds, while striving to enhance the visitor experience.

The existing campground at Stovepipe campground would be redesigned.

The Sunset, Texas Spring, and Furnace Creek campgrounds would be extensively redesigned to accommodate average winter demand and improve camping conditions. The total number of campsites at Sunset would be reduced because the campground is rarely used to capacity. Demands for additional camping areas, such as during the '49er Encampment and spring holidays, would be handled at designated overflow areas, which would be closed at other times. The Furnace Creek area development concept plan would incorporate these changes.

RECREATIONAL ACTIVITIES

The Park would support recreational activities that are compatible with management objectives and current visitor needs. It is recognized that recreational trends continue to change and that specific, detailed direction on certain activities needs to be placed under a guiding statement which provides overall direction. NPS Management Policy on Recreational Activities provides guidance for determining the appropriateness of recreational activities in national park units. NPS *Management Policies* (NPS 1988) also states that each unit of the National Park Service has the responsibility to determine which recreational activities are appropriate or inappropriate, based upon the unit's purposes and values (see the purpose and significance statements for Death Valley National Park).

Unless the activity is mandated by statute, the National Park Service would not allow a recreational activity within a Park if it would involve or result in the following:

- inconsistency with the Park's enabling legislation or proclamation, or derogation of the values or purposes for which the Park was established
- unacceptable impacts on visitor enjoyment due to interference or conflict with other visitor use activities
- consumptive use of Park resources (this does not apply to certain traditional activities specifically authorized by NPS general regulations or by law)
- unacceptable impacts on Park resources or natural processes
- unacceptable levels of danger to the welfare or safety of the public, including participants

Day Use Areas

The following areas would remain designated as day use recreation only with no overnight camping:

- All paved road areas to 2 miles from the road
- Titus Canyon Road
- West Side Road
- Wildrose Road
- Skidoo Road
- Cottonwood Canyon Road (first 8 miles)
- Racetrack Road (from Teakettle Junction to Homestake Dry Camp)
- Inyo Mine, Lost Burro Mine
- Ubehebe Lead Mine
- The main valley floor from Ashford Mill north to 2 miles north of Stovepipe Wells.

Additional day use areas may be established in the new additions to the Park.

Backcountry and Roadside Camping

Small, primitive campsites may be established in some remote areas of the Park to offer alternative camping experiences including Hidden Valley, Butte Valley, Echo Canyon, the Nevada Triangle, Racetrack Valley, and Johnson Canyon.

If camping in wilderness areas resulted in trampled vegetation or compacted soils over widespread areas, specific campsites would be designated. The current backcountry voluntary permit system would be replaced by a mandatory permit system when and where better resource protection was needed or where visitor use had exceeded the desired future conditions for backcountry visitor experiences and resource conditions. The Park has the authority to limit any activity that is causing resource damage. Where

sensitive areas are noted as receiving or have the potential to receive adverse impacts, designated camping sites may be designated away from the area for that area' s protection.

A wilderness/backcountry management plan is currently being prepared by the Park staff. This new plan is necessary because of the broad changes in the amount of area in the Park that is now designated as wilderness. Until the wilderness/backcountry management plan is completed, camping would continue to be directed under existing management. Currently there are over 350 miles of backcountry roads that are open to camping (unless designated closed) with an unknown number of informal campsites. However, use levels at most of these areas is quite light. The Park would evaluate camping in Dedecker Canyon to determine potential and direct impacts upon the local bighorn sheep population and rare plants from visitor activities in the canyon. Park staff would determine whether the canyon or sections of the canyon should be closed to camping to reduce impacts. The Park would also reconsider the issue of allowing limited campfires in the backcountry and wilderness areas during the planning process for the backcountry and wilderness management plans.

An inventory and monitoring program would be established to gather data on backcountry visitor use and related impacts associated with car and other types of camping. Small primitive campsites may be established for car campers and other camps in remote areas of the Park that receive above average use and associated threats to Park resources. The management objective would be to mitigate negative impacts to Park resources, protect human health and safety and provide an alternative camping experience. Improvements would be the minimal tool needed to solve the problem, such as defined tent pads and or anchored picnic tables. This proposal may be considered within the backcountry management plan. If camping in wilderness or other backcountry areas results in destroyed vegetation of other negative impacts to resources or the visitor experience, management actions would be taken to mitigate or eliminate impacts. Management actions may include required camping at designated campsites and or closure of areas to camping.

Backcountry and roadside camping is currently permitted under the following conditions:

- Backcountry camping is allowed 2 miles beyond any developed area, maintained road, or "day use only" area. Other areas may be closed to camping. Visitors should check at the visitor or information centers for current information.
- Vehicle campers shall use pre-existing campsites.
- No camping is allowed in some historic mining districts or on the valley floor from Ashford Mill to 2 miles north of Stovepipe Wells.
- Organized groups with 16 or more people and/or stock animals and 7 or more vehicles need a special use permit.
- The length of stay is limited to 30 cumulative days per year.
- Campfires are currently prohibited outside of designated campgrounds. The proposed backcountry/wilderness management plan will consider where such fires may be permitted under controlled conditions.
- Visitors are not allowed to collect firewood.
- The Park initiated a voluntary backcountry use registration system in 1998 (see alternatives for Saline Valley).

Backcountry Cabins. The current, interim management of backcountry cabins allows visitors to use cabins on a first-come, first-served basis. Visitors are directed to use the cabins in a way that preserves and protects cabins for future use. The length of stay is limited to 30 days. The Park is currently preparing a survey and inventory of cabins in the Park. Results of this survey would be used to prepare further management direction for these cabins based upon their historic significance, condition, and use levels.

When the survey is completed, the results would be interpreted and placed within the wilderness/ backcountry management plan.

NPS Management Policies provide the overall guidance regarding backcountry cabin management:

> "…facilities located in wilderness will be limited to the types and minimum number essential to meet the minimum requirements for the administration of the wilderness area…"
>
> "The construction or reconstruction of shelters for public use generally will not be allowed, since wilderness users should be self-supporting in terms of shelter. An existing shelter may be maintained only if the facility is necessary to achieve wilderness management objectives or cultural resource protection objectives."

Visitor Use in Saline Valley. A site specific management plan would be prepared in consultation with interested public through the NEPA process. The goal of the plan is to create a strategy for management of the area consistent with NPS mandates and policies. The plan would address protection of natural and cultural resources, exotic species, public health and safety, and environmental restoration, environmental and social carrying capacity of the land, and designation of the site as a backcountry campground and the appropriate number and development of sites. The following would limit the scope of the activities permitted at the springs.

- Soaking tubs/spas would be limited to the current level of improvements.
- The Upper Springs would continue to be protected from human improvements and use and from burros.
- The Saline Valley Road would be maintained to its current surface condition by Inyo County.
- An analysis will be made of the Chicken Strip airstrip to determine whether to retain it under 36CFR or whether it should be closed due to safety and/or resource impact concerns.

The proposed site plan will also consider options for the active restoration of the upper springs to a natural condition.

Depending upon future use levels and priorities, the National Park Service could consider maintaining some of the facilities at the springs.

The National Park Service would work with groups associated with the springs, to manage this place in a manner where all members of the public feel welcome. The National Park Service would not actively promote expanded public use of the springs.

FIGURE 4. SALINE VALLEY WARM SPRINGS

VISITOR USE FEES

Recreational fees and their use are determined in accordance with the criteria and procedures of the Land and Water Conservation Fund Act of 1965 (sec. 4, 16 U.S.C.A. 4601-6a (Supp., 1974) and section 3, Act of July 11, 1972, 86 Stat. 461), the Recreational Fee Demonstration Program (P.L. 104-134), and regulations in 36 CFR 71. The Park would continue to explore options for fee collection revenues consistent with congressional direction, including collection by third parties.

In April 2000, the National Park Service, in a partnership with the National Park Foundation, announced a new National Parks Pass. A parks pass provides entrance to all national parks for one year at a cost of $50. Parks selling the pass would be allowed to retain $35 for use on projects at that park. These passes are sold at all national parks and over the internet via several retail partners. In Death Valley National Park, entrance fees would continue to be collected at the Furnace Creek visitor center, Beatty, the Grapevine Entrance Station, Stovepipe Wells, and Baker. It is estimated that currently a significant amount of fees go uncollected. The construction of two entrance stations on Highway 190 is being actively planned to facilitate the collection of these fees and to improve visitor information at major entrances.

Nonreacreational fees would be collected for activities such as incidental business use permits, filming, and special park uses. Death Valley National Park has traditionally been an area where many companies come to film commercials and movies. The area receives a significant number of requests from automobile manufacturers to test vehicle-cooling systems. Filming and incidental business permits would continue to be granted on a case-by-case basis. Commercial tour buses are charged an entrance fee based on the seating capacity of the bus.

COMMERCIAL SERVICES

All commercial businesses that operate in the Park are required to obtain a commercial use permit. The National Park Service operates a concession contract providing lodging, a restaurant and bar, gift shops, general store, and gas service at Stovepipe Wells and food service, a gift shop, and gasoline at Scotty's Castle. It is NPS intent to continue these services. Private overnight lodging not overseen by the National Park Service exists at Furnace Creek and Panamint Springs. The National Park Service would continue to work with the private commercial operations at Furnace Creek and Panamint Springs to achieve mutual objectives and resolve potential problems. No duplicative concession services are planned; however, where additional visitor service needs arise, the Park would evaluate concessions as a means to provide such services.

Organized recreational activities, that originate from outside of the Park and for which a fee is charged (such as guided motor coach tours, guided horseback and hiking trips, photography workshops, nature seminars, etc.), are required to obtain an incidental business permit to conduct these activities. The permit is issued by Park staff and defines the terms under which the commercial activities can be conducted within the Park. The fee for this permit includes the direct and indirect costs of administering the permit. (There is currently a new law that shall require parks to issue Commercial Use Authorizations to replace the incidental business permit, but at present has not been instituted.) The Park will evaluate those commercial uses to ensure that the activities are compatible with Park purposes and that they don't detract or destroy the resources for which the Park was established. In some cases the Park may limit the number of commercial activities or operators if the Park Superintendent determines that Park values or resources are diminished or the Park visitor experience is compromised or intruded upon.

As the local and regional populations near Death Valley National Park increase, and if national and international visitation continue to increase throughout the year, the Park can expect more recreational activities to occur of a commercial nature or origin from outside of the Park. These activities may began to

occur throughout the entire Park area and not just in the major tourist corridor of Highway 190 and the Furnace Creek area as currently exists. This may be especially true of the types of activities that originate from the Las Vegas, Nevada area as those visitors are looking for other recreational opportunities that exist beyond the city. The Park will be required to evaluate the types and numbers of these activities and shall issue no more commercial use authorizations "than are consistent with the preservation and proper management of Park resources and values."

GENERAL DEVELOPMENT CONCEPTS

A development concept plan is an intermediate plan between a general management plan and a specific design with construction drawings. These plans are applied to situations where there is a need to plan for visitor, or other administrative facilities. The process involves an analysis of human activities, natural systems, cultural features, and management objectives for a specific geographic area. Recommendations are then made on appropriate activities and the areas in which they should take place and on what facilities would be needed to support the desired end results. Development concept plans would be prepared for the following areas:

SCOTTY'S CASTLE

A historic resources study, cultural landscape report, and historic structure reports would be prepared to help determine the appropriate uses of the historic structures and the appropriate manipulation of the environment. Upon completion of these reports, a development concept plan would be prepared to establish various facility requirements, the appropriateness of relocating maintenance and curatorial functions, visitor circulation patterns, staffing levels, and the location of employee housing. The concessions program at Scotty's Castle will be retained for the foreseeable future.

FURNACE CREEK AND COW CREEK

A development concept plan would be prepared for administrative and visitor facilities at Furnace Creek and administrative facilities at Cow Creek. Presently the administrative facilities are inadequate. Planning for both areas would be guided by the desire to limit the growth of development and the related demand on Park resources such as water and land. This could be done by relocating some administrative activities that do not need to be within the Park to areas outside of the Park into adjacent communities or through conservation methods.

GRAPEVINE

A development concept plan is underway. The purpose of this plan would be to remove unsightly and inadequate NPS housing and maintenance facilities from a public use area, to consolidate certain functions, provide more adequate housing for Park and concession employees, assure appropriate visitor services, visitor information, safety, and resource protection.

Employee trailer housing would be replaced and temporary facilities would be eliminated. Some National Park Service and concessioner employees now residing at Scotty's Castle might be relocated to Grapevine or another location. A small community building and recreation facilities may be provided. Some maintenance functions could be relocated from Scotty's Castle, and the museum-quality items now stored in various buildings at the castle might be moved into a climate-controlled structure at Grapevine or another location to ensure their appropriate storage (if appropriate space could not be found at the Castle or other locations).

Water and power may be limiting factors in the development of housing and maintenance areas at Grapevine. Further studies would determine if it would be feasible to utilize water in the area. All feasible alternatives would be explored in preparing the development concept plan. Some facilities may be relocated outside the Park.

STOVEPIPE WELLS

Stovepipe Wells would be renovated in accordance with a site management plan. The concessions program at Stovepipe Wells will be retained for the foreseeable future.

- The existing campground would be redesigned.
- The ultimate number of RV hookup campsites at Stovepipe Wells will be determined as a part of the site plan.
- A paved section of the existing airstrip would be converted for helicopter use. The remainder of the airstrip would be converted to a gravel strip and not be used as an overflow camping area.
- Landscaping would utilize native species and would depend on water availability.

WILDROSE

A site plan will be developed for the Wildrose area to determine the future direction of the facilities and use of the area. This may include appropriate use by the Timbisha Shoshone Tribe in accordance with a jointly developed memorandum of understanding between the Tribe and the Park.

ROADS AND CIRCULATION

ROADS

The current road management plan for the Park would be reevaluated because of changes in visitor use patterns, the addition of more roads from Park expansion, and a need to readjust maintenance priorities in reaction to funding levels. The plan would determine such things as the status of duplicate road sections, road surface conditions, and the level of maintenance. An increasing number of buses are entering the Park, resulting in changing visitor use patterns on roads and elsewhere. The management philosophy would be to protect cultural and natural resources, enhance the visitor experience while providing for safe and efficient accommodation of Park visitors. It also would include the need to provide a road system that allows for a variety of driving experiences that are consistent with the purpose and significance statements of the Park. It is very unlikely that new roads would be created in the future unless there is strong justification to do so.

The practice of not performing routine maintenance on high clearance and four-wheel drive backcountry roads would continue. However, emergency repairs might be undertaken following flash floods. Vehicle use in the Park would be limited to street legal vehicles. No offroad driving would be permitted.

A review of the alignment of Highway 190 at Stovepipe Wells would be requested from Caltrans. The intent of this action is to decrease the potential for pedestrian/vehicle accidents near the gas station.

TRAILS

Trails would be managed the same way as described in existing management. A Panamint Crest trail will not be developed. Trailhead orientation signs will be installed where appropriate to aid in visitor safety and resource protection.

SIGNS

Signs would be managed the same way as described in existing management.

ADMINISTRATIVE OPERATIONS AND FACILITIES

PARK ADMINISTRATION

Administrative headquarters for the Park are currently located at Furnace Creek. The NPS structures there were built in the 1960s and are inadequate for existing staff or storage needs. Several historic Civilian Conservation Corps-era adobe structures at Cow Creek provide limited additional space for offices. Water is a critical limiting factor in the Furnace Creek area. The Park also maintains satellite field offices at Scotty's Castle and Stovepipe Wells. Currently, there are Park operations offices located outside the Park at Beatty, Shoshone, and Owens Valley.

Approximately 70% of the Park maintenance staff are located at Cow Creek, with an additional 23% at Scotty's Castle. Four staff positions are located at Stovepipe Wells. The maintenance staff are currently responsible for over 50 visitor service and administrative buildings, 9 campgrounds, 293 miles of paved roads, more than 300 miles of dirt roads, between 100–200 miles of maintained dirt roads, 10 miles of service roads, about 91 housing units, and 8 water systems.

The Park will make an effort to replaced nonnative plants and landscapes with native plants and landscapes around administrative and visitor facilities where appropriate for interpretive, aesthetic, water conservation and other management purposes. Efforts will be made to reduce the number of exotic plants such as athel tamarisk, oleander, and palms.

EMPLOYEE HOUSING

The majority of the Park staff live at the Cow Creek housing area. As of 1998, there are about 60 housing units and 37 transient trailer/RV sites at this location. California Department of Transportation, California Highway Patrol, elementary school employees, and the Natural History Association director occupy nine additional units constructed and maintained by them. Additional housing is provided at the following areas of the Park:

- Stovepipe Wells — 7 units plus 6 transient trailer/RV sites
- Wildrose Canyon — 3 units
- Grapevine — 16 units plus 2 transient trailer/RV sites
- Scotty's Castle — 5 units

The Grapevine/Scotty's Castle area has a severe housing shortage, resulting in several staff members commuting from Cow Creek. The development concept plan underway for the Grapevine area would recommend providing housing and replacing the existing trailers for the northern district of the Park. Ongoing trailer replacement with permanent houses would continue.

Permanently placed trailers will never again be allowed at any NPS housing facility where they currently do not exist. Once the trailers at Grapevine are replaced, this policy will be extended to that location. Transient trailers and RVs are allowed in designated NPS areas, but not permanently placed trailers.

Prior to constructing additional housing for employees, the Park would evaluate the location of the housing and make a determination about whether private housing elsewhere within a one hour drive could

serve the same need, and whether the total housing units are the minimum necessary to meet the mission of the Park.

SOLID WASTE DISPOSAL

The Park landfill near Furnace Creek has been closed to further use and current law and regulations prohibit landfills in parks. Solid waste disposal would continue to be hauled to approved landfills outside the Park.

LANDOWNERSHIP AND USE

PARK BOUNDARY AND AUTHORIZED ACREAGE

No changes in the boundary of the Park are proposed. Clerical or drafting corrections may be made to the maps and legal descriptions. During the prolonged debate over the expansion of the Death Valley National Monument and the creation of the Park by the California Desert Protection Act, the boundaries were subjected to considerable scrutiny and public debate. The National Park Service believes a comprehensive examination of potential boundary modifications at this time is unwarranted. The boundary map submitted to Congress in August 1996 reflects an accurate total acreage of 3,396,172 acres for Death Valley National Park.

The National Park Service intends to locate some facilities outside the Park, consistent with the existing management direction and actions proposed in this plan. This would include, but would not be limited to, visitor facilities in Beatty, Baker, and Lone Pine, as well as possibly other communities. It also includes the potential establishment of a satellite office in or around areas east of the Park to provide office space for some employees.

WILDERNESS

In 1994, Congress enacted the California Desert Protection Act, which designated 3,158,038 acres of Death Valley National Park (95% of the Park) as wilderness.

In 1964 Congress enacted the Wilderness Act, which [sec.2.(c)] defined wilderness as:

> A wilderness, in contrast with those areas where man and his works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man' s work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological or other features of scientific, educational, scenic, or historical value (16 U.S.C. 1131).

The Wilderness Act (section 4(c)) specifically prohibits the following activities in wilderness: commercial enterprises, permanent roads, temporary roads, use of motor vehicles, use of motorized equipment, use of motorboats, landing of aircraft, mechanical transportation, and structures or installations. Wilderness designation does not mean that existing structures within those areas have to be removed. If consideration is given to removing them, that action is covered by the same policies, regulations, and guidelines, and is subject to the same review and compliance procedures, as are historical structures in non-wilderness areas.

The Wilderness Act (section 5(a) and (b)) provides a right of access to parties recognizably vested in lands within BLM or U.S. Forest Service wilderness boundaries (sections 5 (a) and (b), are not applicable to NPS wilderness) including private landowners, state-owned lands, and valid mining rights and occupancies. These sections provide those owners of nonfederal lands or interests in lands may have a right to traverse wilderness to access these lands. Ranchers (on NPS grazing allotments) would normally be required to access wilderness on foot or horseback, similar to other users. However, certain situations may exist where motorized access is necessary to maintain range developments. These types of access could be considered under section 708 of the California Desert Protection Act that provides for adequate access and reasonable use and enjoyment to owners of nonfederal lands or interests that lie in wilderness. A minimum tool determination would be used prior to granting approval for motorized/mechanical equipment use within wilderness.

Congressional action is needed for any boundary changes to designated wilderness areas.

The California Desert Protection Act modifies some provisions of the Wilderness Act. The following are the key provisions of the act related to wilderness:

- Native Americans may gain access to sacred sites in NPS or BLM wilderness, but such access must be consistent with the Wilderness Act [sec. 705.(a)].
- Federal reserved water rights are explicitly reserved for BLM and NPS wilderness [sec. 706(a)].
- Inholders have rights of adequate access for reasonable use and enjoyment in units of the national park system, including NPS wilderness and BLM wilderness [sec 708].

For each non-emergency entry, the grazing allottee may enter Park wilderness, under certain conditions, with a motorized/mechanized vehicle or use motorized equipment with permission from the Superintendent. Emergency entry (imminent danger of loss of livestock, severe facility damage, an injured person requiring transport, or a life-threatening situation) with a motorized/mechanized vehicle and/or requiring the use of motorized equipment must be reported before or just after it occurs. Although over 95% of Death Valley is designated as wilderness, about 700 miles of roads (paved and dirt) remain open within this Park (Rothfuss 1996).

The National Park Service would manage wilderness areas for the use and enjoyment of the American people in a way that would leave them unimpaired for future use and enjoyment as wilderness. Management would include the maximum statutory protection allowed for these areas, the preservation of their wilderness character, and the gathering and dissemination of information regarding their use and enjoyment as wilderness. Public use of wilderness may include recreation, scenic preservation, scientific study, education, conservation, historical use, and solitude. A separate wilderness/backcountry plan (in progress) would address specific management actions.

The Wilderness Act generally prohibits motorized equipment or mechanized transport in designated wilderness areas; however, it allows them "as necessary to meet minimum requirements for the administration of the area for the purpose of this Act." The Superintendent would administer wilderness lands in the Park with the minimum disturbance to the area or its resources. All decisions pertaining to administrative practices and use of equipment in wilderness would be based on this concept. Potential disruption of wilderness character and resources and applicable safety concerns would be considered before, and given significantly more weight than, economic efficiency. If some activities must occur in wilderness, only those actions that would have acceptable impacts would be acceptable.

The Park will use the "minimum tool" concept when proposing to control exotic vegetation within a wilderness area.

The process of delineating final wilderness boundaries for the Park is provided in title VI of the California Desert Protection Act. This process of determining and mapping the S-21 wilderness boundaries is still underway. The wilderness boundaries in Figure 3 reflect the preliminary interpretation; however, the legal descriptions have not yet been prepared. Once completed, final wilderness boundary maps would be submitted to Congress. It is assumed that the actual wilderness acreage may deviate from the approximate acreage of 3,158,038 acres estimated in section 601 of the act.

The California Desert Protection Act (sec. 601b) provides for an additional 6,840 acres of the Park to become wilderness automatically upon cessation of all uses prohibited by the Wilderness Act and publication of such notice in the *Federal Register* by the Secretary of the Interior. This area is the powerline corridor from Furnace Creek to Stovepipe Wells as depicted in the *1989 Draft General Management Plan.*

The NPS wilderness management policies are based on statutory provisions of the 1916 NPS Organic Act, the 1964 Wilderness Act and the California Desert Protection Act. In addition the Park uses the "Principles for Wilderness Management in the California Desert" for reference. These reference materials were developed in 1995 by the federal managers of the Mojave Desert for informational purposes. The managers represented the Bureau of Land Management (California Desert and Yuma Districts), the National Park Service (Death Valley and Joshua Tree National Parks and Mojave National Preserve), and the U.S. Fish and Wildlife Service (California State Supervisor). The Park staff will work with surrounding agencies to provide the maximum consistency in desert wilderness management.

LAND ACQUISITION

The National Park Service is required by the USDI policy to prepare a land protection plan for every NPS unit that has nonfederal lands or interests in its authorized boundary. The "Land Protection Plan" for Death Valley is included in this document (see appendix B). Detailed descriptions of the nonfederal lands and interests are also included. The National Park Service would seek funds to acquire the majority of private lands and interests in the Park based on priorities presented in the "Land Protection Plan." Private land at Furnace Creek and Panamint Springs would be acquired if requested by the owners. Private land in wilderness, habitat for threatened or endangered species, and riparian areas would be considered high priority for purchase. Donations and exchanges of real property from willing sellers would be a priority, and third party acquisitions from willing sellers would be encouraged. Exchange of state school sections in the new lands would continue to be actively exchanged pursuant to the California Desert Protection Act direction.

MINERAL DEVELOPMENT ACTIVITIES

The Park would administer mineral development activities under existing laws and regulations applicable to such activities. This action is the same as the existing management alternative. Please refer to that alternative for a complete description.

FIGURE 5. LANDOWNERSHIP

COLOR 11X17

(Back of Figure 5: Landownership Map)

ABANDONED MINES

The legacy of past mining in the Park has left hundreds of abandoned mine sites with possibly thousands of mine openings and workings. Experience in the old monument lands and preliminary observations on the new lands indicate the problem is a significant land management issue. The 1992 Western Region Directive WR-085, Management of Abandoned Mineral Lands (AML) outlines the framework for a Park AML program. The National Park Service would conduct a comprehensive inventory of all AML sites in the Park to serve as the basis for future planning and reclamation program implementation. The inventory would build upon existing information from the U.S. Geological Survey, Bureau of Mines and Bureau of Land Management databases, as well as previous data collected by Park staff. The program goals would include elimination of physical safety hazards and hazardous materials; mitigation of adverse environmental impacts to Park resources, including the restoration of landscapes, soils and vegetation; protection of important wildlife habitat such as bat habitat; and preservation of historic and cultural resources which may include stabilization of structures.

SAND AND GRAVEL FOR ROAD MAINTENANCE

The use of borrow sources for road maintenance would be evaluated during the preparation of the road management plan. Such use would conform to NPS *Management Policies*.

FIGURE 6. MINING CLAIMS AND INACTIVE MINES

CATTLE GRAZING

No grazing is permitted on the former monument lands. As authorized by the California Desert Protection Act of 1994, the privilege of cattle grazing within the Park shall continue at no more than the October 31, 1994 level and is subject to applicable NPS regulations, policies, and Park management direction.

The animal unit months (AUMs) for each grazing permit (Figure 6) in Death Valley National Park at the time of the signing of the California Desert Protection Act (1994) were:

	AUMs
Hunter Mountain	1,105
Last Chance	1,628
Eureka Valley	0
Lacey-Cactus-McCloud	0

No grazing would be permitted on the NPS portions of the Eureka Valley or Lacey-Cactus-McCloud BLM allotments. No permit has been issued on the Last Chance allotment since 1996 due to the lack of forage. The NPS considers this area of the Park to be permanently retired from grazing. The NPS would work with the permittee on the Hunter Mountain allotment to develop grazing practices and levels, not to exceed 1,105 AUMs through development of a grazing management plan. This area has a defined season of use from November 20 to June 30.

The AUMs as of the date of the current planning effort (2000) within Death Valley National Park is:

	AUMs
Hunter Mountain	1,105
Last Chance	0
Eureka Valley	0
Lacey-Cactus-McCloud	0

The California Desert Protection Act directs the Secretary of the Interior to make the acquisition of "base property" from willing sellers a priority above all other acquisitions in the Park. Death Valley's management goal is to achieve the permanent retirement of grazing. If ranchers notify the Superintendent of their willingness to sell base property, the Superintendent would immediately notify the Secretary of the Interior of the priority acquisition and request Land and Water Conservation funding from Congress. The Park would also work with conservation organizations to purchase grazing permits from willing sellers. Once a grazing permit was purchased and the new owners (i.e. conservation organizations) request retirement, it would be permanently retired. Also, if an allotment were placed in a nonuse status, after a period of five years, it would be permanently retired.

Where permits are acquired or retired, ranch developments could eventually be removed and site restoration undertaken.

The NPS grazing management plan would evaluate all significant resources the permit area. Those resources would include sensitive plants, habitats, other unusual plant assemblages, sensitive animals, and cultural resources. The plan would include how many cattle and the time and place where these cattle would be allowed to graze, seasonal restrictions, the placement/movement of mineral blocks and water facilities as a tool to alter cattle use patterns, pasture rotation, etc. The plan would also establish a monitoring protocol to allow frequent evaluations of the Park resources to evaluate efficacy of the management practices. Management changes would be made accordingly.

Fees would be based on BLM schedules and NPS Special Use Permit costs. Grazing fees would be used for Park resource management and restoration projects. Restrictions on grazing use would be based on resource conditions, visitor safety and wilderness values. The Superintendent has the discretion to lower grazing use levels, as necessary to respond to resource protection needs, visitor safety, or wilderness values. Use levels would be based, in the interim, on existing permit plans, and if changed, would be based on scientific data, and on water, forage, protection of threatened and endangered species, riparian areas, water availability, and soils.

In regard to access, ranchers would normally be required to access wilderness on foot or horseback, similar to other users. However, certain situations may exist where motorized access is necessary to maintain range developments. These types of access could be considered under section 708 of the California Desert Protection Act that provides for adequate access and reasonable use and enjoyment to owners of nonfederal lands or interests that lie in wilderness. A minimum tool determination would be used prior to granting approval for motorized/ mechanical equipment use within wilderness. Death Valley National Park would follow the Wilderness Act and the California Desert Protection act in the administration of the Park' s wilderness areas.

Permit area fences would be inspected to ensure they provide for movement of wildlife. In cases where movements may be impeded modifications would be required.

FIGURE 7. CATTLE GRAZING PERMIT (1994)

If the grazing permittee seek to acquire new water rights for the permit area, NPS *Management Policies* require that all rights to the use of water diverted to or used on federal lands within national parks would be perfected in the name of the United States.

Under this proposed action three of four permits have been permanently retired. The National Park Service will allow cattle grazing of 1,105 animal unit months on the Hunter Mountain permit area and until such time as all grazing is retired, subject to the considerations indicated above.

PLAN IMPLEMENTATION

OPERATIONAL COSTS

The existing Park operating base in FY 00 is $5.4 million and existing staffing is 108. In order to fully implement the proposed action over the 15-year life of the plan, and assuming that above proposed activities are undertaken and visitor use of the Park increases, an additional 37 staff would be needed. This would require approximately $1.7 million per year added to the Park' s operating base to cover salaries, benefits, and administrative expenses (space, utilities, vehicles, etc.).

The estimated costs of acquiring private lands and mining claims under this alternative are not yet available. No comprehensive evaluation of land acquisition costs has been undertaken in accordance with NPS policy and therefore cannot be estimated at this time. The cost of acquiring property involves title searches, appraisals, relocation costs, and fair market value of the property. These specific costs would be available only on a property by property basis and would need to be determined based on current market values. An approved cost estimate for the land protection alternative selected would be prepared at a later date by the Washington office.

TABLE 3: PROPOSED ACTION COST SUMMARY

Proposed Activity	Gross Construction Costs	Pre-Design Costs & Supplemental Services	Design Costs	Total Project Costs	Phase
Remove feral burros (approx. 400 animals @ $1000/burro); fencing approx. 50 miles; census every 3-5 years @ $40,000/census	N/A	N/A	N/A	$400,000; $1,800,000; $40,000	I
Site improvements at multiple sites to protect resources (fences, boardwalks, wayside exhibits, vault toilets)	$1,060,000	$60,000	$90,000	$1,210,000	I
New wayside exhibits (total project cost)	N/A	N/A	N/A	$200,000	I
Furnace Creek visitor center rehabilitation	$4,720,000	$280,000	$400,000	$5,400,000	I
Construct office space in Beatty for 12-15 employees	$350,000	$25,000	$35,000	$410,000	I
New displays for information stations at Stovepipe/Beatty/Shoshone	$175,000	$10,000	$15,000	$200,000	I
Entrance stations & reception centers (displays, parking, kiosks, walkways) on east and west 190	N/A	N/A	N/A	$200,000	I
Campground redesign and improvements (Sunset, Furnace Creek, Texas)	$944,000	$56,000	$80,000	$1,080,000	I
Saline Valley Site Management Plan (planning and compliance)	N/A	N/A	N/A	$200,000	I
Grapevine Development Concept Plan (housing, roads, community center, RV pads, maintenance and curation buildings, water/sewer system)	$5,900,000	$350,000	$500,000	$6,750,000	II
Scotty's Castle historic studies and landscape reports; development concept plan	N/A	N/A	N/A	$500,000	I

Proposed Activity	Gross Construction Costs	Pre-Design Costs & Supplemental Services	Design Costs	Total Project Costs	Phase
Stovepipe Development Concept Plan (convert paved airstrip to gravel, redesign old campground, landscape)	$472,000	$28,000	$40,000	$540,000	I
Furnace Creek & Cow Creek Development Concept Plan (planning and compliance)	N/A	N/A	N/A	$300,000	II
Wildrose Development Concept Plan (planning and compliance)	N/A	N/A	N/A	$250,000	I
Backcountry campsite improvements (fire rings, tables)	$130,000	$8,000	$11,000	$149,000	II
Restoration of abandoned mine sites (estimated 300 sites at $15,000 each)	$5,310,000	$315,000	$450,000	$6,075,000	III
TOTALS	**$19,063,000**	**$1,132,000**	**$1,621,000**	**$25,704,000**	

PHASES

I	1-5 years
II	6-10 years
III	spread evenly over 15 years

Construction and planning cost estimates provided in the above table are conceptual estimates only. These are costs of similar types of facilities and past NPS experience derived from contract data. The estimates include indirect costs added to cover such things as design services, contract supervision, and contingencies. They also take into account the cost of contracting for such services in a remote Park setting, seasonal constraints, labor availability, and wage rates. The costs are based on 2000 values.

ALTERNATIVE 2: EXISTING MANAGEMENT (NO-ACTION)

GENERAL DESCRIPTION

This alternative describes the existing management approach that the National Park Service has been following for the management of Death Valley National Park. These actions are typically referred to as the "status quo" or no-action alternative. Death Valley National Monument operated under a *General Management Plan* that was approved in 1989 and other site-specific planning including the *1983 Resource Management Plan*. Management actions described under alternative 2 would include only those activities that have been or are actually being implemented. New Park lands added to the unit in 1994 would continue to be managed under NPS policy and regulations and an interim operations strategy. Where specific management direction is lacking in the existing *General Management Plan*, Park staff would follow guidance found in regulations, the NPS *Management Policies* (1988) and NPS guidelines.

NATURAL RESOURCES

PHYSICAL ENVIRONMENT

Death Valley National Park currently manages air quality, viewsheds, night sky, noise and overflights, geological resources, and cave resources under the policies addressed in alternative 1 and would continue to manage these resources under this strategy.

Water Resources

Water rights. State records have been searched to identify outstanding water rights.

Water Use. Same as alternative 1.

Water Developments. Maintenance of existing livestock tanks and troughs would continue to be allowed with the Superintendent's permission as long as negative impacts to Park resources don't occur. Motorized access within wilderness areas for the purpose of guzzler maintenance or filling shall be reviewed on a case-by-case basis.

Paleontological Resources

The Park, in cooperation with researchers, would continue to identify paleontological resources in the Park. Most scientific research would be conducted by entities other than the National Park Service. A paleontological comprehensive report or database would not be a priority under this alternative. Resource protection would continue to consist of random patrols of the backcountry as well as limited public closures to protect sensitive sites.

BIOLOGICAL ENVIRONMENT

Sensitive Species

The National Park Service would expand its baseline data on species of special concern (see appendix C) by continuing to gather information on the distribution, abundance, and threats for these species through cooperative efforts with universities. All compliance actions in the Park would consider the actions' impacts on those species. Steps would be taken to protect habitat to ensure the preservation of sensitive species.

Listed and special status species and their habitats would continue to be considered during the permitting process for all compliance activities in the Park. Where impacts were predicted, mitigation measures would be applied or the permit would not be approved.

NPS Activities at Devils Hole

Activities involve biannual pupfish counts, servicing of water monitoring equipment, and intermittent inventory/research activities. Each of these activities is designed to monitor the long-term status of the pupfish or its habitat.

Devils Hole pupfish counts will be conducted on a biannual basis. These counts will be scheduled for the spring and fall of each calendar year. The spring count is typically conducted in March or April, and the fall count is conducted in September or October. During a given census day, a morning and an afternoon count will be made at Devils Hole.

The water level monitoring program utilizes different types of equipment that store digital and hard copy formats of information. Operation and maintenance of the facility consists of bi-monthly inspections, monthly data retrieval, and periodic/annual maintenance. The bi-monthly inspections provide assurance of the correct equipment alignment with the staff gauges, data acquisition, equipment operation, equipment damage or misalignment resulting from seismic induced water level surges, and evidence of any vandalism to the site. Hydrologic field technicians also inspect, service, and replace equipment at Devils Hole three to five times per year.

Because Devils Hole possesses unique geologic and hydrologic characteristics, Park staff expect that a variety of research and/or inventory projects will be proposed at Devils Hole over the next several years. Many of these projects will be designed to provide baseline and research documentation of the hydrologic aspects and physical components of the pool. These studies may include but not be limited to measurements that involve dissolved oxygen content and distribution, existence and physical parameters of convection currents, water chemistry parameters, dimensions of the subterranean extent of the cavern, etc. Some of the proposed studies may also relate to biological components in the aquatic system.

Introduced Species

The Park's management goal is to minimize the existence of exotic species within the Park. New exotic species would not be introduced without the Superintendent's permission. Threatening nonnative species would be controlled or eradicated where possible.

Burros. The management of burros in the former monument would be to continue implementing the last phase of a three-phased program described under alternative 1. The National Park Service has agreed not to shoot burros as long as an animal protection group is successfully removing burros from the old monument lands at their expense.

On new lands added to Park in 1994, the Park has entered into an interim agreement with the Bureau of Land Management to manage the area at previous BLM herd management levels (297 burros and 9 horses). The existing population is estimated to be about 250–350 burros and 12 horses.

Nonnative Vegetation. As in Alternative 1 the control of invasive exotics such as tamarisk, Russian thistle, and hornwort would continue.

Disturbed Land Restoration

Disturbed lands would be managed in the same way as described in alternative 1. Natural ecosystems would be perpetuated. Natural landscapes could be manipulated to encourage the growth of native or

historically correct species. Disturbance caused by natural causes (e.g., landslides, natural fire) would not be modified unless conditions presented safety or resource protection concerns. Cultural zones like Scotty's Castle would be managed as a historic landscape. The rehabilitation of abandoned mine sites would continue.

FIRE MANAGEMENT

The Park is operating under their *1990 Fire Management Plan*. The following are goals of that plan:

- To allow fire, as an ecosystem process in the biotic communities of the Park, to resume its natural role to the fullest practical extent.
- To provide for rapid, aggressive, and safe suppression of all fires that do not meet management objectives by defining suppression responsibilities, organization levels, and decision-making processes.

RESEARCH

High quality information is vital for the proper management of the Park and protection of Park resources. The Park uses a multi-faceted process to initiate the accumulation of scientific knowledge. Studies may be conducted with in-house expertise and funding, or with outside assistance (both money and people).

Park resource information needs are defined within the Park's *Natural and Cultural Resources Management Plan*. The *Natural and Cultural Resources Management Plan* is a document that lists Park research needs, threats to Park resources, projects that would mitigate the threats, and a ranking of these projects. Each year these lists are submitted for national ranking and possible funding. The *Natural and Cultural Resources Management Plan* is updated as needed to maintain a current listing of issues and threats. Funding for projects may be from the existing Park budget, receipt of funds from system-wide competition, or outside funding sources, such as grants.

Independent researchers often apply to the Park for research permits. Such research is encouraged. The information gained may have practical application for the protection of Park resources or for visitor enjoyment. More theoretical research may, in the long run, yield the basic knowledge necessary to protect Park resources. Information may be valuable to the field of science far beyond Park boundaries. Independent research supports the concept of "parks as classrooms" when students learn from the protected natural resources of the Park. The Park functions as a natural laboratory open for observation and scientific inquiry. The Park, through scientific research, provides information to outside areas about desert ecosystems, and provides the baseline by which the uses of those areas may be evaluated.

Research permits or scientific collection permits are issued to researchers from universities, museums or other agencies when their studies are consistent with legislation, especially the NPS Organic Act of 1916, the California Desert Protection Act of 1994, the Wilderness Act of 1964, and the National Parks Omnibus Management Act of 1998. Some research projects propose techniques that unacceptably impact Park resources. Preference is given to projects which have a high benefit to Park resource protection, visitor enjoyment or science, and a low impact on Park resources.

INVENTORYING AND MONITORING

Management of the Park's resources is currently guided by direction provided in the enabling legislation and NPS regulations and policies. An existing *Natural and Cultural Resource Management Plan* provides further guidance for this program. Staffing and funding to manage this program would remain at the current level, with modest increases possible through special initiatives. Project priorities would be

determined based on existing staff availability and funding. A strategic plan would be prepared annually that provides goals, objectives and annual work plans for the Park. The strategic plan also provides five-year goals that allow some limited view of resource issues and allocation of staffing and funding.

CULTURAL RESOURCES

Cultural resources management in the Park focuses on National Park Service compliance efforts to meet the requirements of the National Historic Preservation Act, the Director's Order #28: Cultural Resource Management (1998), and NPS *Management Policies* (1988).

Cultural resource management programs would continue to include: (1) data collection and inventory of archeological sites, ethnographic resources, historic properties, and museum objects/specimens; (2) intermittent updating of the list of classified structures (the list has been updated during FY 97); (3) cultural resource studies; (4) finalization of national register nomination forms; and (5) collection/management of museum collections, including historical objects and archival documents, archeological artifacts, ethnological materials, biological specimens, geological samples, and paleontological materials.

The National Park Service would provide protection and limited stabilization of archeological sites, ruins, structures, and objects. Resources would be protected through ranger monitoring activities, with remedial actions focused primarily on sites in high-use visitor areas.

Cultural resources, including archeological sites, ethnographic resources, and historic structures would continue to be evaluated under criteria for listing on the national register on a project specific basis. Historic properties listed on, or determined eligible for listing on, the National Register of Historic Places would be afforded stabilization/preservation treatment as funding allows, with preservation efforts focused primarily on key resources having national or regional significance in high-use visitor areas. The rehabilitation and adaptive use of historic structures, such as several buildings at Scotty's Castle and CCC-era buildings at Cow Creek, would be a priority to ensure their preservation. The National Park Service would continue to cooperate with the private owners of historic properties in the boundaries of the Park, such as the Furnace Creek Ranch and Furnace Creek Inn, to preserve and interpret significant resources.

Numerous historic structures such as mining sites and backcountry cabins are located in wilderness or remote areas. Some or these resources possess national register significance; others have been determined to be ineligible for inclusion on the register; others have not been evaluated. In addition, many of these resources present safety hazards (e.g., open mine shafts). Generally, structures and sites that are listed on or eligible for listing on the national register and/or have safety concerns would continue to have higher priority. The treatment of significant properties could include documentation, stabilization, and/or preservation. Sites presenting safety risks or having hazardous materials could be treated through methods such as closing and sealing of mine shafts and tunnels, after appropriate documentation/collection of structures and artifacts. All treatment undertaken on significant or potentially significant resources would be subject to National Historic Preservation Act section 106 compliance.

For structures and resources determined not to be eligible for inclusion on the national register, treatment options could include natural deterioration, with no efforts being made to maintain the structures/sites or to provide access to them. In some special cases, nonhistoric structures with importance could be stabilized if conditions warranted.

NATIVE AMERICAN INTERESTS

Same as alternative 1.

VISITOR USE, SERVICES, AND FACILITIES

INTERPRETATION

The Park's *1990 Interpretive Prospectus* and the comprehensive interpretive plan (in progress) would reflect the recent addition of lands, individual site plans, and other appropriate support documents. In the interim, interpretive services would continue wherever NPS staff could effectively meet with the public to increase their understanding and appreciation of Park resources. Interpretive wayside exhibits within the Park would continue to be upgraded in accordance with a wayside exhibit plan prepared for Death Valley by Harpers Ferry Center. Additional wayside exhibits would be developed for key features along heavily traveled corridors within recently acquired lands and elsewhere within the Park if the need to interpret and or protect resources arises.

The primary interpretive theme as identified in the *1989 General Management Plan* for the monument is to integrate the geological, cultural, and biological aspects, concentrating on the harshness of the environment and the adaptation that all living things must make to live here. This theme would continue to be used.

INFORMATION/ORIENTATION

In addition to the visitor facilities at Furnace Creek and Scotty's Castle, staffed information/ fee collection stations are located in Beatty, Nevada, Grapevine and at Stovepipe Wells and would continue to operate on reduced schedules. Ranger stations at Grapevine, Wildrose, and Shoshone also provide visitors with information and would operate with volunteer staff. Funding would be sought to increase NPS staff presence at these facilities to meet visitor demand for assistance.

The Park would continue to support the multiagency information center at Lone Pine that serves visitors accessing Death Valley from the Owens Valley to the west and the Mojave National Preserve's Baker, California facility that assists visitors approaching the Park from the I-15 corridor to the south. These points would provide information, orientation, and interpretation for the Park and the region.

The Park would continue to maintain and enhance information on Death Valley via the National Park Service website (www.nps.gov/deva), and would continue to explore new opportunities for information distribution as technology develops.

VISITOR FACILITIES

Interpretive Facilities

The Park would continue to operate major visitor centers at Furnace Creek and Scotty's Castle and would continue to provide ranger stations at Grapevine, Wildrose, Shoshone, and Beatty. Furnace Creek would continue to include a staffed visitor information desk, interpretive displays, a large auditorium, and a sales outlet of the Death Valley Natural History Association. This facility was completed in 1960 and planned when annual visitation was 250,000. Annual visitation is now approximately 1.2 million. Its interpretive media are dated and focus on the old monument lands.

The visitor center in the historic Gas House at Scotty's Castle would continue to focus its interpretive program on the history and character of the castle and the people tied to its story. New displays, which depict the history of the people, construction of the buildings, and the complex, are now complete. The visitor center also functions as a sales outlet, and during the summer season, serves as ticket sales and general information center. The guided tour, which involves NPS employees dressed in period costumes telling the story of how Scotty's Castle came to be and the individuals who lived there, would continue. Tour fees would directly support the interpretive tours.

Developed Campgrounds

In 1998, Death Valley operated nine developed campgrounds, providing a variety of camping experiences from tent camping at higher elevations to facilities for recreational vehicles at Furnace Creek. Campgrounds would continue to exist in the following locations but the number of campsites could vary slightly over time. Smaller campgrounds or parts of campgrounds could be eliminated if situations arise where threats to visitor health and safety can not be mitigated.

The following are the nine developed campgrounds and the number of campsites at each campground:

- Emigrant with 10 sites
- Furnace Creek with 126 sites
- Mahogany Flat with 10 sites
- Mesquite Springs with 30 sites
- Stovepipe Wells with 200 sites
- Sunset with 1000 sites
- Texas Spring with 92 sites
- Thorndike with 10 sites
- Wildrose with 30 sites

RECREATIONAL ACTIVITIES

All recreational activities would be the same as those described in alternative 1 except for visitor use in Saline Valley.

Visitor Use in Saline Valley. Improvements such as pit toilets, fire grills, a shower, hot tubs, and picnic tables would continue to be maintained by the public using the springs. Roadside camping would continue to be allowed. The Park's 30-day camping limit would apply to the valley. Park volunteers at the springs would assist visitors and would provide a radio link to Park rangers for emergency situations. Visitor protection and resource education rangers would patrol the area to provide assistance, enforce regulations, and educate visitors but not on a daily basis. The Saline Valley Road would continue to be maintained by Inyo County. The Park would consider a request by advocates and users of the springs to enter into an agreement for maintenance assistance in the area.

Two airstrips exist in the valley, the Chicken Strip (located north of the road to the springs) and the Tail-Dragger airstrip (located south of the road), which were created and maintained by the public to provide air access to the valley. The Tail-Dragger airstrip would remain closed.

VISITOR USE FEES

Death Valley National Park currently collects recreational fees at the Furnace Creek visitor center, the Grapevine entrance station and information/ranger stations at Stovepipe Wells and Beatty, Nevada, and

Baker, California. Recreational fees are also collected for camping at the developed campgrounds located within the Park and for the guided tour offered at Scotty's Castle.

Filming and incidental business permits would continue to be granted on a case-by-case basis. Commercial tour buses are charged an entrance fee based on the seating capacity of the bus.

COMMERCIAL SERVICES

The Park oversees and manages contracts for concession services located at Stovepipe Wells and Scotty's Castle. Stovepipe Wells offers visitors general services such as lodging, food, gasoline, and a small market, while Scotty's Castle provides food, gasoline and a gift shop. A development concept plan for Stovepipe Wells provided guidance for improvements to buildings and other facilities. No plans exist to significantly expand the current level of concession services there. The Park also permits other commercial services such as guided tours, hikes, and trail rides that occur in a variety of areas in the Park, both in the backcountry and developed areas. The Park works cooperatively with the owners of Panamint Springs Resort and with Amfac Resorts, which owns and operates commercial services at Furnace Creek, but does not have any authority over management of these commercial services.

GENERAL DEVELOPMENT CONCEPTS

A development concept plan is an intermediate plan between a general management plan and a specific design with construction drawings. These plans are applied to situations where there is a need to plan for visitor, or other administrative facilities. The process involves an analysis of human activities, natural systems, cultural features, and management objectives for a specific geographic area. Recommendations are then made on appropriate activities and the areas in which they should take place and on what facilities would be needed to support the desired end results. A development concept plan for Stovepipe Wells was completed in 1980 and is being updated. A development concept plan for Cow Creek was completed in 1984. A development concept plan for the Grapevine area is in progress and would be completed. (See Alternative 1 for details).

ROADS AND CIRCULATION

ROADS

There would be no changes in the existing roads. Some limited upgrading of heavily used roads might be undertaken as funds permit. The Park would continue to maintain 243 miles of paved roads and 442 miles of non-paved roads (see "Affected Environment"). The state would continue to maintain Highway 190, which traverses the Park east to west through Furnace Creek Wash and over Townes Pass. Inyo County would continue to maintain an estimated 75 miles of paved and unpaved roads in the Park, principally in Saline Valley and the new additions on the north and west side of the Park.

Little or no maintenance would be performed on high-clearance and four-wheel-drive backcountry roads. However, emergency repairs might be undertaken following flash floods. Vehicle use in the Park would be limited to street-legal vehicles. No offroad driving would be permitted.

Highway 190 is designated as a national scenic byway from Townes Pass to the eastern boundary of the Park, one of only two of the national designations in the state of California. The road will continue to be managed for its superb scenic and historical values.

TRAILS

At the present time, hiking is allowed on all open trails, while equestrian use is allowed in most areas. Single-track pedestrian walks or trails, such as Golden Canyon, would not be open to equestrian use. Bicycles would not be allowed on single-track trails or in wilderness. Cross-country foot or equestrian travel is allowed. No new trails are currently planned but would be considered in the wilderness/backcountry management plan.

The wilderness/backcountry management plan would address specific trail use by hikers, equestrians, and people with disabilities. The plan would also address the intensity of trail development, including the type and number of signs, trails, and trailheads, long distant trails extending into other jurisdictions, and the anticipated maintenance levels for developed trails. Abandoned roads in wilderness would continue to be closed to mechanized use (vehicles and bicycles) according to the Wilderness Act, but would be considered for use as trails in the wilderness plan. The *1989 General Management Plan* called for a Panamint Crest Trail to be developed from Aguereberry Point south into Johnson or Warm Spring Canyon. The need for this is somewhat questionable given the open character of the area. This proposal would be re-examined by the Park in the wilderness/backcountry planning effort.

SIGNS

The Park's management direction on signs is for signs to be unobtrusive, minimal, and blend with the natural environment so that the undeveloped wild character and sense of exploration remains. A sign plan would be prepared by the National Park Service that would ensure this vision is carried out. The sign plan would provide for directional signs to major points of interest which are typically located on the major roads that receive most of the traffic. Secondary or backcountry roads would remain relatively free of directional signs. It is the intention of this management direction to keep visitors from becoming lost and allow the backcountry roads to remain lightly traveled. Efforts would be made in the sign plan to use international symbols or other appropriate methods to keep signs simple and easily understood for the broad spectrum of visitors entering the Park. Because the desert can be unforgiving in the summer, consideration would be given in the sign plan for signs that could help protect the health and safety of visitors unfamiliar with the desert. Boundary signs would be maintained at all Park access points in the backcountry to inform people that all historical, archeological, and natural objects are protected under federal law. A variety of media would also be used to minimize the proliferation of signs.

ADMINISTRATIVE OPERATIONS AND FACILITIES

PARK ADMINISTRATION/EMPLOYEE HOUSING

Existing and future Death Valley National Park headquarters, administrative, resource management, visitor and resource protection, interpretative, and maintenance staff buildings and employee housing would remain in the Furnace Creek, Cow Creek, Grapevine, Scotty's Castle, Stovepipe Wells, and Wildrose areas of the Park (see "Affected Environment" for complete description).

SOLID WASTE DISPOSAL

The Park landfill near Furnace Creek has been closed to further use. Current law and regulations prohibit landfills in parks. Solid waste disposal would continue to be hauled to approved landfills outside the Park.

LANDOWNERSHIP AND USE

PARK BOUNDARY AND AUTHORIZED ACREAGE

Section 302 of the California Desert Protection Act established the Park and abolished the previous monument, incorporating all the previous monument lands into the new Park. No authorized acreage was specified in the act. The Congressional maps delineating the boundary of the Park and referred to in section 302 are dated July 1993, and are often commonly called the S-21 Maps. This set of 26 map sheets provided the basis for the preparation of the official boundary maps and legal description (see appendix A of the "Land Protection Plan") by the National Park Service. The National Park Service prepared the official boundary maps (9 map sheets dated July 1996) according to section 304 and submitted them to Congress in August 1996, completing the process of preparing official boundary maps of the Park. These maps are on file with the Superintendent for inspection. Figure 2 provides an overview of the Park boundary and preliminary wilderness. The "Land Protection Plan" (appendix B) provides a breakdown of the landownership.

WILDERNESS

Wilderness would be managed as described in alternative 1. Recommendations of the wilderness/ backcountry management plan (in progress) would be implemented. Wilderness management would continue to focus on horse patrols and backcountry road patrols on open corridors to assist visitors and identify illegal activities. Wilderness would be considered in all compliance and permitting actions, and appropriate mitigation would be applied. The "Principles for Wilderness Management in the California Desert" would be used for reference.

LAND ACQUISITION

The Park would continue to regulate nonfederal rights through existing law or other regulations. Purchases of nonfederal properties is not an ongoing or active program, but would occur on an opportunity basis from willing sellers as funding is available. Donations and exchanges are pursued from willing sellers, and third party acquisitions from willing sellers are encouraged. State school sections in the new lands are actively being exchanged by the Bureau of Land Management pursuant to the CDPA direction.

The National Park Service is required by USDI policy to prepare a land protection plan for every NPS unit that has nonfederal lands or interests in its authorized boundary. A draft land protection plan for Death Valley National Monument was prepared in the mid-1980s, but never finalized. This draft plan has been updated to reflect the addition of new land. (See appendix B).

MINERAL DEVELOPMENT ACTIVITIES

The Mining in the Parks Act of 1976 (P.L. 94-429) prescribed that all activities resulting from the exercise of valid existing rights on patented and unpatented mining claims within any area of the national park system shall be subject to regulations developed and administered by the National Park Service. The regulations governing mining activities on all patented and unpatented claims found at 36 CFR Part 9A require operators to file a plan of operations with the National Park Service for all mineral related activities. Proposed mining operations must meet the approval standards provided in the regulations and post a performance bond equivalent to the cost of reclamation before an operation would proceed.

No specific mining is authorized by this general management plan. Each mining proposal is required to submit a detailed mining and reclamation plan and undergo separate environmental impact analysis.

Consultation for listed species and cultural resources would occur at that time. When mining is authorized, full reclamation of the site is required upon cessation of mining activity.

Congress also closed the Park to all new mining claim location and all other forms of appropriation and disposal. Section 305 of the California Desert Protection Act withdrew the Park from all forms of entry, appropriation or disposal under the public land laws; from location, entry and patent under the United States mining laws; and from disposition under all laws pertaining to mineral and geothermal leasing and the sale of mineral materials. This provision of the act is subject to valid existing rights.

The National Park Service also regulates mineral development on valid nonfederal oil and gas interests in accordance with 36 CFR Part 9B. This involves property where the surface is held by the federal government, but the mineral rights were retained by the private party when the land was acquired.

Whenever a proposed mineral development fails to meet the regulatory approval standards and no alternative development scenario is feasible, the National Park Service would seek funding to initiate acquisition of the mineral rights.

ABANDONED MINES

The Park has not developed a comprehensive inventory of abandoned mine lands for the old Monument area. General information is provided in the "1981 Historic Resources Report" by Greene and Latschar. A preliminary inventory of abandoned mining properties on the new lands was generated from existing information in the U.S. Geological Survey and Bureau of Mines databases. Additional detailed surveys would be conducted to provide more detailed information on the abandoned mineral properties parkwide. Appropriate stabilization, reclamation, and hazardous material clean-up would be carried out after development plans and environmental and cultural resources compliance had been completed, and, as funding was available.

SAND AND GRAVEL USE FOR ROAD MAINTENANCE

Building materials (sand, gravel, cinder, etc.), geothermal resources, oil, and gas on federal lands would remain unavailable for extraction or sale. The use of borrow materials for road maintenance would have to conform to existing NPS policy that requires materials to be obtained from nonpark sources, unless economically infeasible.

CATTLE GRAZING

No grazing is permitted on the former monument lands. The California Desert Protection Act provides for grazing to continue at no more than the current level (1994) on the new Park lands. The National Park Service allows cattle grazing on one previous BLM allotment under a special use permit. A permit for 1,105 animal unit months for the Hunter Mountain permit currently covers the 1999–2000 grazing period. There were 1,628 animal unit months on the Last Chance permit, but there has not been a special use permit issued to the permittee for several years (1996). Small portions of the BLM Eureka Valley and Lacey-Cactus-McCloud permit areas existed in the Park. Currently, these permits have neither range developments nor cattle grazing on Park lands. Cattle grazing would not be permitted on the Death Valley National Park portion of these permit areas. The Bureau of Land Management has stated that with the permits' small size and location on NPS land, their elimination would result in no change in the permittees' BLM lease arrangements or in the number of cattle permitted to graze on BLM lands (Lee Delaney, BLM, pers. comm., December 1997).

The California Desert Protection Act directs the Secretary of the Interior to make the acquisition of "base property" from willing sellers a priority above all other acquisitions in the Park. Death Valley's

management goal is to achieve the permanent retirement of grazing. If ranchers notify the Superintendent of their willingness to sell base property, the Superintendent would immediately notify the Secretary of the Interior of the priority acquisition and request Land and Water Conservation funding from Congress. The Park would also work with conservation organizations to purchase grazing permits from willing sellers. Once a grazing permit was purchased and the new owners (i.e. conservation organizations) request retirement, it would be permanently retired. Also, if an allotment were placed in a nonuse status, after a period of five years, it would be permanently retired.

Where permits are acquired or retired, ranch developments could eventually be removed and site restoration undertaken, subject to environmental and cultural compliance (including a determination of national register eligibility and National Historic Preservation Act section 106 compliance on all cultural features over 50 years old).

The NPS grazing management plan would evaluate all significant resources in each viable permit. Those resources would include sensitive plants, habitats, other unusual plant assemblages, sensitive animals, and cultural resources. The plan would include how many cattle (at no more than the current level on 10/94) and the time and place where these cattle would be allowed to graze, seasonal restrictions, the placement/movement of mineral blocks and water facilities as a tool to alter cattle use patterns, pasture rotation, etc. The plan would also establish a monitoring protocol to allow frequent evaluations of the Park resources to evaluate efficacy of the management practices. Management changes would be made accordingly.

Fees would be based on BLM schedules and NPS Special Use Permit costs. Grazing fees would be used for Park resource management and restoration projects. Restrictions on grazing use would be based on resource conditions, visitor safety and wilderness values. The Superintendent has the discretion to lower grazing use levels, as necessary to respond to resource protection needs, visitor safety, or wilderness values. Use levels would be based, in the interim, on existing permit plans, and if changed, would be based on scientific data, and on water, forage, protection of threatened and endangered species, riparian areas, water availability, and soils.

In regard to access, ranchers would normally be required to access wilderness on foot or horseback, similar to other users. However, certain situations may exist where motorized access is necessary to maintain range developments. These types of access could be considered under section 708 of the California Desert Protection Act that provides for adequate access and reasonable use and enjoyment to owners of nonfederal lands or interests that lie in wilderness. A minimum tool determination would be used prior to granting approval for motorized/ mechanical equipment use within wilderness. Death Valley National Park would follow the Wilderness Act, and the California Desert Protection act in the administration of the Park' s wilderness areas.

Permit area fences would be inspected to ensure they provide for movement of wildlife. In cases where movements may be impeded modifications would be required.

If grazing permittees seek to acquire new water rights for their allotments, NPS *Management Policies* require that all rights to the use of water diverted to or used on federal lands within Parks would be perfected in the name of the United States.

PLAN IMPLEMENTATION

The Park currently has about 108 permanent employees and an operating budget of $5.4 million. Staffing and funding for most visitor services and maintenance of facilities is expected to remain at approximately

constant levels. Some special initiative projects, repair and recreational fee demo replacement funds, and routine cyclic maintenance funding are anticipated.

TABLE 4: DEATH VALLEY NATIONAL PARK EXISTING STAFFING

Function	Existing Staffing
Park Management	2
Administration	10
Resource Mgmt.	15
Protection/Fee*	27
Maintenance	34
Interpretation**	20
Total	108

*Included in Protection/Fee are 12 for fee collection positions funded out of fee collection receipts

**12 interpretation positions for Scotty's Castle living history, are funded 100% out of interpretive tour receipts

ALTERNATIVE 3: OPTIONAL MANAGEMENT APPROACH

GENERAL DESCRIPTION

This alternative is the same as alternative 1 (proposed action), except for developed campgrounds, visitor use in Saline Valley, and landownership and use. Only those sections that are different from alternative 1 are included below.

VISITOR USE, SERVICES, AND FACILITIES

Developed Campgrounds

The Emigrant campground would be closed because of the potential flood hazard.

Backcountry and Roadside Camping

Visitor Use in Saline Valley. All areas within the Eureka-Saline wilderness road corridor would be open for roadside camping. Designated car camping would be established in the area of springs.

Road maintenance, between Saline Valley Road and Lower Warm Springs, trash pick up and removal, toilets and all other maintenance functions at the warm springs would continue to be done by user groups under agreements with the Park. A volunteer camp host system would continue to provide visitor services.

No airstrips would be permitted in Saline Valley.

LANDOWNERSHIP AND USE

LAND ACQUISITION

Private land or interests would be only acquired on an opportunity basis if the National Park Service was approached by a landowner wanting to sell, or if a development project would adversely affect Park resources. Exchange of state school sections would continue.

MINERAL DEVELOPMENT ACTIVITIES

The Park would administer mineral development activities under existing laws and regulations applicable to such activities. This action is the same as the existing management alternative. Please refer to that alternative for a complete description.

The Park would also undertake a sensitive resource analysis based on an objective analysis of physical, biological, cultural and visitor use values relative to projected mining impacts. This analysis would examine potential mineral development scenarios that would be likely to occur on each property based on the deposit, and assuming operator performance standards and specific mitigation would be applied to protect resources and values. The results of this analysis would be used to identify areas of the Park where mineral development would be inconsistent with the mission of the Park and likely mineral development would not be able to meet 36 CFR Part 9A or 9B approval standards. In these areas, acquisition of the mineral rights would be pursued.

PLAN IMPLEMENTATION

OPERATIONAL COSTS

The existing Park operating base in FY 00 is $5.4 million and existing staffing is 108. In order to fully implement the proposed action over the 15-year life of the plan, and assuming that above itemized activities are undertaken and visitor use of the Park increases, an additional 37 staff would be needed. This would require approximately $1.7 million per year added to the Park' s operating base to cover salaries, benefits and administrative expenses (space, utilities, vehicles, etc.).

The costs of implementing proposed activities identified under this alternative are the same as the proposed action. The estimated costs of acquiring private lands and mining claims under this alternative are not yet available. No comprehensive evaluation of land acquisition costs has been undertaken in accordance with NPS policy and therefore cannot be estimated at this time. The cost of acquiring property involves title searches, appraisals, relocation costs, and fair market value of the property. These specific costs would be available only on a property by property basis and would need to be determined based on current market values. An approved cost estimate for the land protection alternative selected would be prepared at a later date by the Washington office. Refer to "Table 3: Proposed Action Cost Summary."